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THE

ANNUAL MEDICAL REVIEW

AND

REGISTER,

FOR THE YEAR

1809.

MANCHESTER INFIRMARY

MANCHESTER INFIRMARY

BY

A SOCIETY OF PHYSICIANS.

Ut hoc pulcherrimum esse judicem, vera videre; sic, pro veris probare falsa, turpissimum est. CICERO, *Academic.* IV.

VOL. II.

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It having been suggested to the Editors of this work, that the name, which they had originally chosen for it, was liable to misconstruction, and did not convey a correct idea of its contents, they have been induced to make such an alteration in the title, as will effectually obviate any misunderstanding in future.—They have also attended to the representations which were made to them, concerning the smallness of the letter in which the first volume was printed, and hope, that the typographical execution of the second will give general satisfaction.

There is some slight change in the plan, the reasons for which it may be proper to mention. Having found it impracticable, to procure such a variety of miscellaneous information as could impart much value to the concluding portion of the volume; and conceiving, besides, that the introduction of the passing news of the day did not well accord with the general character of the work; the

Editors resolved to discontinue this part altogether, and to confine themselves to a review of medical books, followed by a Summary of the Progress of the Science, and a Report of the State of Health and Disease.

Notwithstanding the partial renewal of our continental commerce, there has not been such a supply of foreign books, as to add greatly to the interest of the critical analysis which is given in the following pages. To remedy this defect, the Editors had it in contemplation, to furnish, at the conclusion of the Historical Sketch, a digest of the contents of the principal foreign journals. But finding, that, from the irregular arrival of the publications in question, such a review would not have embraced the latter months of the year, they have thought it advisable to postpone the complete execution of their design, till they shall be enabled to perform it in a more satisfactory manner.

With respect to the account of British works, which is presented in the volume now offered to the public, the Editors believe, that, with the exception of one or two new editions, which escaped their attention till it was too late to remedy the omission, the list will prove to be tolerably correct: at least, no new publication of importance has passed unnoticed. But, in order to render this division of the Register as complete as possible, the Editors will esteem themselves obliged, if, in future, the

authors or publishers of those books or pamphlets, which are imperfectly or not at all advertised, particularly those that appear in the country, will have the goodness to send copies of them, or transmit notice of their publication, addressed to the Editors, at Mr. Murray's, 32, Fleet Street.

ACKNOWLEDGMENTS TO CORRESPONDENTS.

The Editors have received a letter from Mr. Luxmore, of St. Mary-Axe, disavowing all knowledge or countenance of the pretended new edition of his "Familiar Observations on Ruptures," which was noticed in Vol. I. page 191, and readily acquit him of any share o. blame in the transaction. His letter, however, they must consider as a confirmation of the general accuracy of their assertions in the article referred to.

Homo will perceive, that his suggestions have been partly anticipated in the formation of the present volume. It will be the study of the Editors to render the future volumes still more acceptable to their Norwich friends.

ERRATA.

Page	8	line 36,	after *pestilens*, insert *status*.
	69	—— 28,	for *Collegio*, read *Collegii*.
	71	—— 36,	— *habito*, read *habita*.
	104	—— 37,	— *cure*, read *care*.
	163	—— 4,	— *these*, read *those*.
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	220	—— 17,	after *enjoy*, insert *the*.
	386	—— 14,	for *physiology*, read *physiological*.
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ANNUAL MEDICAL REVIEW.

MANCHESTER INFIRMARY

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CHAPTER I.

THEORETICAL AND PRACTICAL MEDICINE.

ART. I. *An Inquiry into the Laws of Epidemics; with Remarks on the Plans lately proposed for exterminating the Small-Pox.* By Joseph Adams, M. D. F. L. S. Physician to the Small Pox and Inoculation Hospitals, &c. 8vo. pp. 159. Johnson.

THE author introduces this little volume to his readers, with two apologies, 'for having so long delayed to offer in print his opinion on a subject so immediately connected with his own engagements, and on which the public has a right to demand the result of his inquiries.' Our attention was strongly arrested by this alleged necessity of apology, as well as by the apologies themselves, which must appear equally extraordinary to our readers, who recollect the previous course of the author's proceedings. We were not aware that five years (the period of his 'engagements' at the hospitals mentioned in the title page) were sufficient for the establishment of any great medical truths, or that the laws of epide-

mics could be so speedily ascertained, in an institution, where one disease only is admitted. The father of physic apologized for the imperfection of his knowledge, by comparing the brevity of man's life with the length of observation requisite for successful inquiry in medicine: 'Ars longa, vita brevis,' &c. It were preposterous, then, to talk of '*long* delay' on such an occasion. The first reason for this delay, however, was a delicacy on the part of Dr. Adams, an anxious fear lest his brethren should view his labours with *suspicion*. 'It always carries a suspicious air, when a writer addresses the public on a subject connected with his own profession.' p. 1. This is a new idea to us; for we conceive that a suspicion of disingenuous motives can only attach to the promulgation of a popular address, couched in improper terms, or conducted in an improper manner. The idea, indeed, must have recently occurred to Dr. Adams; since he distributed three editions of a *popular* pamphlet, in 1804 and 1805, answering 'all objections to the Cow-pox,'* and so late as 1807, published 'A *Popular* View of Vaccine Inoculation,' &c. But the second apology for delay is still more extraordinary.

'Another reason was the difficulty of finding any thing to *oppose*. To *defend* small-pox inoculation, is only to repeat all that was said fifty years ago, and has been repeated ever since, till the last ten years. To admit that vaccination is a most important improvement, is equally superfluous. To say that this second improvement ought not by force to supersede the first, would only lead to those arguments by which small-pox inoculation was first defended; and to answer clamour and invective, requires a mind organized like those who use them.' Introd. p. 2.

Here is abundant ground for comment. What had the answerer of all the objections against the cow-pox to do with the *defence* of *small-pox* inoculation? Yet he has delayed to write, because he could say nothing new in *its defence!* and because it were quite superfluous to *admit* that vaccination is a most important improvement! Is this the language

* We find, on farther inquiry, that Dr. Adams has published *five* editions of this pamphlet, the last of which appeared in 1807.

of a friend to vaccination? There is at least a prodigious difference in the sort of friendship, which our author now entertains for the practice, and that which he professed when he entered the Small-pox Hospital. It is unfortunate for those whose opinions are liable to change with times and circumstances, that the *litera scripta* is immutable: no doubt Dr. Adams feels the 'inconvenience' to which he alludes, in a letter to the Register of the College. 'Another inconvenience has arisen from a too great forwardness at answering objections before they were sufficiently matured.' p. 151. At all events, his language formerly was directly opposite to that of his present work, and to the strenuous appeals which he has lately made to the governors of the Small-pox Hospital, in order to induce them to rescind the resolutions entered into in 1808, interdicting the inoculation of out-patients with small-pox.* For example:

In 1805, 'I cannot conclude without a few other remarks. It has been said by some of the best of people, that it is every one's duty to inoculate for the small-pox, because by it the child is saved from a severer disease. This *was* very proper *before a better method was known.* But *now* it becomes every one's duty, not only to think of their own, but of every other person's children: *To do as they would be done by.* Now, it is well known, that whoever is vaccinated, not only is equally safe from the small-pox, much safer from humours than if inoculated with small-pox, but also that he cannot convey the disease to another. Whereas, by inoculation for the small-pox, *a whole town may be infected,* and *numbers carried off* before they are aware of the cause. For your own sakes, therefore, for the sake of others, and *keeping in view a Christian command,* I trust you will persuade every one *to relinquish a practice which has nothing to plead in its favour, and adopt another against which nothing can be said!*' Answers to all Objections, &c. p. 27.

Here, it may be remarked, the author directly contradicts his assertion, above quoted, that only the same arguments can be adduced in favour of superseding the small-pox by vaccination, which were first employed in the defence of

* See Blair's 'Hints,' &c.

variolous inoculation. This *new* argument, the non-contagious influence of cow-pox, though paramount in the discussion, is now overlooked.

In 1806, a year after his election to the hospital, Dr. Adams said, 'From the moment I was thought worthy of the office of Physician to the Small-pox Hospital, no industry on my part has been wanting in the examination of that invaluable prophylactic which we owe to Dr. Jenner, and also of a disease, *which, I trust, will hereafter be only known in books.*' Med. and Phys. Journal, Vol. XVI. p. 248, for Sept. 1806.

Why Dr. Adams was desirous of dividing his attention between the 'invaluable' vaccination, and the small-pox, which he hoped to see exterminated, is somewhat problematical. Certain it is, however, that he did not even make an equal division of his attention, but so far restored variolous inoculation, which had been diminished by his predecessor, Dr. Woodville, as to extend that disease to upwards of *four thousand* out-patients in the year 1807; and in the same year he published his 'Popular View of Vaccine Inoculation;' the first half of which book, (strange to tell!) was occupied in describing the management of *small-pox inoculation*, as performed with peculiar mildness and safety by himself and Mr. Wachsel, the apothecary of the hospital! His next effort of the pen, was an address to the General Court of the Hospital, recommending the continuance of the inoculation of out-patients with small-pox, *regardless of the 'Christian command,' which he had adduced for the direction of others.** This was unavailing; and all attempts to obtain the rescinding of the resolution, interdicting such inoculation, having been equally fruitless, the present volume is brought forth.

Thus much we deemed it necessary to recall to the recollection of our readers, by way of introduction to our analysis of the work before us; as it might tend to throw some light, as well on the observations already quoted, as on the conclusions intended to be deduced from the reasoning in the

* See Blair's 'Hints for the Consideration of Parliament,' &c. p. 220.

sequel. It may possibly serve to explain, likewise, the recent delicacy and fear of suspicion expressed by the author of these incongruities; more especially as he has never pretended to question the validity of the facts, which he formerly advanced as decisive of the advantages of vaccination. 'Thus conscience does make cowards of us all.'

With respect to the doctrine, which is inculcated in this volume, with an air of originality, as the result of our author's inquiries, it is merely the doctrine published by Dr. Bayley, of New York, in his account of the yellow fever prevalent in that city in 1795, and illustrated by Dr. Miller,* and other American physicians, subsequent to that period; although no intimation is given by Dr. Adams of the real author of the opinions, which he has espoused. It is this doctrine, against which Dr. Chisholm has published the letter, reviewed in the present volume of our work; and which has been farther discussed by Dr. Hossack, of New York, in a letter to Dr. Chisholm, published in the Medical and Surgical Journal of Edinburgh,† which we shall have occasion to notice in the sequel. Yet Dr. A. talks of the demand of the public for *his inquiries!*

This 'Inquiry' is divided into ten chapters, occupying from page 10 to 99 inclusive, the remainder of the volume consisting of notes, and a short appendix. Had the author really delayed this publication, he probably would have made a more luminous arrangement of his materials, and a more methodical disposal of his chapters. The first two chapters relate to 'epidemics, the contagious property of which is not ascertained,' and to 'the manner in which different epidemics supersede each other.' In the former, it is barely stated, that much difference of opinion has been manifested in regard to the existence or non-existence of contagion, in small-pox, yellow fever, ague, &c.; but the discussion is postponed, and the chapter occupied in describing some of the circum-

* See Dr. Miller's Report to the Gov. of New York, dated Jan. 1806, published in the Edinburgh Journal, Vol. III.

† Vol. V. p. 427.

stances, in which the infection of typhus (*i. e.* jail, hospital, camp, or ship fever) is generated. Wherever men are congregated in numbers, in close and ill ventilated situations, when any illness exists, or is produced by this unnatural situation, 'a new kind of air is generated, which produces a fever called usually by the name of the place where the event has occurred, whether a camp, a ship, or poor-house, jail, or hospital. This kind of air affects all who breathe it; yet such as are suddenly exposed, are influenced by it in a manner different from those by whom it has been gradually vitiated. To the latter it often proves a kind provision, to relieve them from a severer or more protracted misery. Under the name of fever an universal torpor is produced, a disinclination for food, an indifference to all external objects; and, if no change takes place, the patient sinks peaceably into the arms of death.' p. 11. 'When the air becomes more suddenly vitiated, or when men in high health are suddenly exposed to this infectious atmosphere, the effects are proportionably violent. Such is often the case in an army, when the difficulties of a campaign, or the numbers wounded *after* an engagement, require a sudden and indiscriminate accumulation of the sick and wounded.' p. 12. This is illustrated by an observation from Dr. Jackson, another from Assalini, and by a reference to the black assizes, at the Old Bailey, in 1750. In such cases, Dr. Adams wishes 'to avoid as much as possible confounding the fever with the cause that excites it,' which last he distinguishes by the term '*infectious atmosphere.*'

In the second chapter, after remarking that it has been observed, in general, that the more violent epidemics supersede all other diseases, the author resumes the discussion of the contagious property of particular epidemics; and contends especially that the yellow fever and the plague are probably *not* contagious. It is admitted by all, he observes, that the plague and yellow fever are only known in particular seasons, and in certain climates; and he affirms, that neither the one disease nor the other is communicated by those affected, when they are removed to healthy towns and districts, any more than the fever caught at the black assizes was

communicated, by the persons seized, to the rest of their families. And he farther states, that if both these epidemic diseases have excited reasonable suspicions of contagion among well-informed men, the same suspicion has also been attached to ague, (as by Dr. Cleghorn, &c.) The facility with which mistakes may be made on this subject, is thus clearly pointed out:

'If a hospital or building of any kind is situated near the source of ague, many of the inhabitants will be seized with the disease; but, from various causes, some may fall ill earlier than others. Hence those who are last seized, may seem to be infected by the first; and this uncertainty can only be removed by the migration of some individuals to a place free from the miasma of ague. If these go with the disease upon them, or if the disease appears upon them after their removal thither, and in this state they infect none of the resident inhabitants, we cannot call the disease contagious, but must ascribe its spreading in the place of its origin to the local cause, which affects so many in the same way.' p. 16.

Dr. Adams, therefore, infers, that the diseases before mentioned, whether contagious or not, spread or cease according to certain properties of, or changes in, the *external* atmosphere. Hospital or camp fever, indeed, he allows to be 'the offspring of an *artificial* atmosphere,' and the product of every season and climate.

'This atmosphere may also be conveyed by wool, cotton, or any substance capable of confining air; in which case it will retain its infectious property. In this last instance, it approaches nearer to the contagions; but nothing can be called a contagion, unless the person affected by it can induce a similar disease in others, without regard to season, climate, or any local circumstances. Now, we know by the black assizes, and many other instances, that a person infected by this atmosphere does not, unless he remains in a confined atmosphere, induce a similar disease in others; consequently, this fever has not all the properties of a true contagion.' p. 18.

The author then proceeds, in chapter iii. to treat of the *true contagions*, such as small-pox, measles, and scarlet fever; which 'can only be excited by a cause similar to the effect,' and 'may not only be conveyed at any season, climate, or

temperature, but, under all these circumstances, every person affected with either is contagious;' p. 21: and we know of no boundary to the epidemic contagions, except that they occur but once during life in any individual. Dr. Adams is disposed to maintain an opinion, (which was expressed relative to the small-pox in Oxford above a century ago,) that the pure air, which puts a stop to hospital fever, is the most ready conductor of the 'contagions,' and that 'wherever the mortality has lessened from the other epidemics, it has increased from the contagions.' p. 23.

Such are the leading points of this doctrine, which are illustrated more at large in the subsequent chapters.

The nature of contagion, and even its existence in connexion with particular diseases, is, doubtless, a subject upon which decision is very difficult; and, accordingly, it has been the source of much discussion, since a very early period after the restoration of learning. Physicians entered largely into the inquiry in the sixteenth century, and the majority of them maintained the contagious nature of the plague, which, however, others disputed, attributing the epidemic to some occult constitution of the atmosphere.* How early the knowledge of contagion existed, is a matter of considerable doubt. Dr. Adams affirms, 'it is certain that the physicians, before the Arabians, make no mention of epidemics, excepting such as arise from places, seasons, and constitutions of the air. It is, however, easy to detect the hospital or poor-house fever from their philosophers, (Plin. Sec. Epist. lib. viii. ep. xvi.); the camp fever from their historians, (Livy, lib. xxv.); and, if not the yellow fever, at least the fever of new settlements, from their poets, (Virgil, lib. iii. Ovid, lib. vii.)' Now, it is certain, in our opinion, that Galen, at least, was acquainted with the existence of *pestilential contagion;* and he has expressly stated, that the plague not only arises from a particular state of the atmosphere, but is communicated, *like scabies,* by the commerce of individuals. His words are, (in the translation of Leonicenus,) 'Et quidem quod aëris pestilens febrem

* See Diemerbroeck, de Peste, lib. i. cap. x.

afferre consuevit, nemo sanæ mentis dubitavit, sicuti et pestilenti morbo laborantium *conversatio periculosa, ne inde contagium contrahatur,* quemadmodum ex scabie et lippitudine.'* The ancient historians, indeed, seem to have been well aware of the influence of contagion; and Livy, as well as Ovid, in the passage referred to by Dr. Adams, mentions contagion in express terms.† But the sagacity with which Dr. A. 'detects the hospital or poor-house fever' from the letter of Pliny, and the yellow fever in the Æneid, is truly risible. Pliny laments the death of his domestics; 'Confecerunt me infirmitates meorum, mortes etiam, et quidem juvenum;' which words do not convey a very clear account of a 'poor-house fever' to our apprehensions, (and nothing farther is said of their malady,) any more than the 'Arboribusque satisque lues, et lethifer annus' of Virgil depicts the *yellow* fever! Diemerbroeck, whom Dr. Adams appears to have consulted, would have afforded some more unequivocal testimonies, in Thucydides, Appian the Alexandrian, &c.‡

Dr. Adams affirms, 'it will surprise many of my readers, to hear that Sydenham considered small-pox as a disease arising from certain unknown properties in the atmosphere, *unconnected with contagion.*' p. 10. It is, we admit, rather

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* Galen. de Differ. Febr. lib. i.

† Livy even states a particular epidemic to have been local in its origin, but to have become *contagious* afterwards. 'Et primo temporis ac loci vitio, et ægri erant, et moriebantur: postea *curatio ipsa et contactus ægrorum* vulgabat morbos.' Cap. xxvi. The same historian, describing a pestilence early in the fourth century, U. C., says, '*vulgatique contactu* in homines morbi.' Lib. iv. cap. xxx. If, by the imperfect reference to Ovid, Dr. Adams alludes to the admirable description of a pestilence, in the 25th fable of book vii. of the Metamorphoses, he might there have found also an explicit mention of contagion, by which the physicians and attendants suffered.

——'obsuntque auctoribus artes:
Quo propior quisque est, servitque fidelius ægro,
In partem leti citius venit.' Metam. VII. Fab. xxv.

Can it be doubted that the existence of contagion was well known in those times?

‡ Loc. cit.

extraordinary, that our sagacious countryman should have said so little respecting contagion, which had been the subject of much observation by his predecessors, from Fracastorius downwards; but probably his devotion to the opinions of Hippocrates may have induced him to attend chiefly to the 'epidemic constitutions.' However, it seems to us, that no such inference can be deduced from his writings, as is quoted above. Sydenham only states, that small-pox, like the plague, often affects a few individuals only, but is occasionally 'rendered *epidemic*,' by certain states of the atmosphere.* And speaking of the '*malignity* which belongs to epidemics,' he says, 'ita ignis ignem generat, et maligno infectus morbo *socium inficit*, *spirituum* scilicet *emissione*, qui humores mox inficiendos sibi adsimilant, et in naturam suam perducunt trahuntve,' &c.† This is a clear expression of the notion of contagion, and would rather lead us to suppose that Sydenham considered all malignant epidemics as infectious. On the whole, we cannot consider Dr. Adams's industry and research, upon these topics, as commensurate with the 'long delay' of his publication.

The great distinction, which our author, with Dr. Bayley and the American physicians, is anxious to make between the two classes of diseases that are liable to become epidemic, and upon which his subsequent precepts, relative to the extermination of the diseases, entirely hinge, is into 'contagions,' most strictly so called, and 'diseases of infectious atmosphere.' The distinction between the common contagions, and 'specific contagions,' in the language of most modern writers, implies the same notion; namely, that the latter possess peculiar or specific properties, which do not belong to the former; and these are generally stated to consist, 1. in the power of affecting individuals but once during life; and, 2. in their origin, as far as we know, being invariably from the secretions of a person labouring under the same disease. It is also generally admitted, that the specific contagions are more active than the contagion of common fever: but it is

* Sydenham Opera, sect. ii. cap. ii. † Ibid. sect. v. cap. v.

commonly believed that the '*laws*' of both species of contagion, (to use the author's favourite term,) are in other respects similar. Such is the opinion of Drs. Haygarth, Clark, Percival, Lind, &c. &c. and it is admitted by Dr. Adams himself. It cannot be questioned, indeed, that, in examining the properties and the modes of destroying these contagions, every peculiarity demands our attention; but the point for discussion at present is, whether this notion, that the two forms of contagion differ altogether in kind; *i. e.* whether the one is, but the other in fact is not, contagion; or whether both are contagions, differing only in degree of activity, at least as far as regards their propagation, is correct.

By 'contagion,' we understand a matter secreted from a diseased body, (whether in a solid, fluid, or vaporous form,) and capable of exciting a similar disease in others to whom it is applied. This, we apprehend, is also the idea attached to the word by Dr. A., though we no where observe any definition of it. Now, in this sense, we see no difference, *quoad* its propagation, between the contagion of jail-fever and of small-pox, except in the more virulent activity of the latter. Both, we apprehend, are propagated by secreted effluvia from the body of the sick; both require a certain predisposition in the persons to be infected; and both must be received in an adequate quantity or *dose*, (in Dr. Haygarth's phrase,) and cannot infect beyond an indefinite distance. The distance and the dose are, doubtless, less in the case of small-pox. Farther, both the species of contagion are capable of adhering to various substances, constituting *fomites*, and both are often thus actually propagated; both, again, spread most fatally in a crowded and close population; and both are more active among those persons who are unaccustomed to their influence. These analogies, in the mode of dissemination of the two species of contagion, stand upon the unquestionable basis of experience, and imply a general similarity of their nature.

But the objection, which is urged against the claims of typhoid effluvia to be deemed contagious, is, that fevers of this class, not excepting the plague, do not infect others, when

the patients are removed into healthy places; whereas the true contagions are infectious under all circumstances. Let us inquire, then, how those fevers become infectious, or how the 'infectious atmosphere' is produced. 'Hospital or camp fever is the offspring of an *artificial* atmosphere,' Dr. Adams says, p. 18. He says also, that, wherever men are congregated in numbers, 'if any illness exists, or as soon as illness is produced by their unnatural situation, *a new kind of air is generated,* which produces a fever,' &c. p. 11. Now, does Dr. Adams really suppose that a *new air* is produced? or does he not rather conceive that the existing atmosphere is *impregnated with the effluvia* from the bodies so congregated and diseased? And if it be these effluvia, which render the atmosphere infectious, in what does such an atmosphere differ essentially from one impregnated with the contagious effluvia of small-pox or scarlet fever? Indeed, from other expressions it may be collected, that the author understood this infectious atmosphere to be rendered pernicious by 'the quantity of infectious matter contained' in it, p. 12; which matter, it is to be presumed, consists of the secretions of the bodies of the sick. 'This atmosphere may also be conveyed,' we are told, 'by wool, cotton, or any substance capable of confining air,' p. 18; whereas we have reason to believe, that 'the infectious matter' may adhere to, and be conveyed by, substances incapable of conveying in air, *e.g.* to wood, &c. as the virus of small-pox adheres to a lancet. It seems to us not to alter the nature of the argument, to urge the fact, that these infectious secretions may be produced from persons labouring under any sort of disease, if inhabiting crowded and ill ventilated apartments; while contagions originate only from similar diseases. Is a pestilential secretion less a secretion endowed with contagious properties, because it may consist even of the accumulated and corrupted fluids of health? And, if in a well ventilated room, or in a healthy airy situation, during a pestilence, a patient in fever does not communicate his disease; does the fact prove more than the comparative feebleness of the contagious secretion, which, when diluted in the fresh air, is not sufficiently poisonous to infect the by-

standers? Not to mention that the statement which Dr. Adams makes so roundly, respecting the non-communication of the plague and the yellow fever, by persons removed from the source of infection, is by no means universally corroborated. If Dr. Chisholm* or Dr. Blane† be entitled to any credit, the yellow fever has most decidedly spread under such circumstances; and Dr. De Mertens‡ asserts, that the plague was conveyed to the villages around Moscow, in the year 1771, by the removal of persons labouring under the disease; as indeed formerly happened in the villages near London. Neither can it be asserted in the unqualified manner of our author, that the person of a patient in typhus, in a well aired room, cannot communicate infection: by a very close and constant attention near a patient of this description, fever may be caught; and we are equally convinced, from an occurrence which we witnessed, that, where extreme ventilation and constant changes of linen prevent such an infection, the use of the linen, even when the patient is completely convalescent, will induce fever. This implies, surely, the occurrence of a contagious secretion, which is deposited on the linen, and not the 'generation of a new air.'

But the matter seems to us to be stated in its true light by Dr. Hossack, of New York, in a letter to Dr. Chisholm, dated July, 1808. He says, that the distinction proposed by Dr. Bayley, of *contagious* and *infectious* diseases, though it comes nearer the truth than any of his predecessors had advanced, does not present us with a view of the whole truth.

'The visitor or attendant contracts disease from one of *two sources*; either from the filth of the sick-room, or from a *specific something* issuing from the body of the sick, the consequence of the peculiar disease under which he labours. If a person, visiting another ill of the *yellow fever* or *plague*, derives his disease from the *impure atmosphere* of the apartment, I ask, how it happens, that in all instances he

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* Treatise on the Malign-pestilent-Fever. See also our Review of his Letter to Dr. Haygarth, *infra*.

† Letter to Baron Jacobi, Edin. Journal.

‡ On the Plague at Moscow. Lond. 1799.

contracts the *same disease* with that of the person whom he visits? Why is his disorder not an intermittent, a remittent, jail fever, or dysentery, which are considered the usual produce of filth? If he derives any thing specific from the sick, his disease is then assuredly not to be considered as occasioned by the *atmosphere*, but depending on the *peculiar condition of the fluids*, or state of the system, induced by the action of a specific poison: in other words, it is to be considered a *contagious* disease. The distinction proposed by Dr. Bayley, inasmuch as it does not account for the *peculiar form* of fever or disease, which is thus propagated, I therefore consider to be insufficient to account for the circumstances attending the communication of those diseases to which it is applied. That I may not be misunderstood, I will suppose A to be ill of a *dysentery*, a disease well known to be connected with a peculiar train of symptoms: he is in a small confined apartment, his person is neglected, the atmosphere around him is rendered impure and offensive: under these circumstances B visits him, and in a few days afterwards is also taken sick with the *same disease*, attended in all respects with the *same* dangerous symptoms which characterize the disorder of A. Dr. Bayley, and those who adopt the doctrine of *Infection* as opposed to *Contagion*, consider the disease of B to proceed from the *impurities of the air of the chamber*, and not any thing *peculiar* emanating or secreted from the body of A. But as we may, without hazard, visit an equally filthy chamber, where C lies ill with *cholera morbus*, or D with a *broken limb*, I therefore ascribe the disease of B to something more than the *impure air* of the chamber of A. I ascribe it to a *peculiar virus*, generated in his system by the disease under which he labours, and communicated by his excretions to the surrounding atmosphere, rendering it thus capable of producing the same disease in those who may be exposed to its influence.' See Edin. Med. Journal, Vol. V. p. 428.

Besides, this doctrine of infectious '*atmosphere*,' as distinct from infectious secretion, is exceedingly objectionable, as tending to confirm that false, but popular notion, which the labours of Dr. Haygarth and others have contributed to remove; viz. that contagion from these fevers is conveyed abroad by the air, and may infect at considerable distances; a notion, which is wholly confuted by the long observation of the physicians just alluded to, and exploded by the general experience of the Houses of Recovery through the united

kingdom. The limited operation of contagion in the air, is also demonstrated, we apprehend, with respect to small-pox, by the experiments of Dr. O'Ryan, of Montpelier,* and with respect to scarlet fever, by Dr. Haygarth himself.†

Dr. Adams, then, goes on to notice a few facts superficially, in order to shew what Drs. Heberden, Rush, Miller, and others have shewn, from a more ample survey of the subject,—the connexion of the plague, and yellow fever, as well as agues, with certain states of the soil, in particular places and seasons. The plague, he observes, originates in towns, ague in marshes, and the yellow fever under similar circumstances in tropical regions. 'Agues are more frequent in proportion as a country is ill drained and ill cultivated. Plague is frequent in proportion as a town is ill drained or ill paved; that is, as the excrements of living, and corrupted parts of dead, animals are suffered to remain on the surface, and to be gradually absorbed by the earth.' p. 41. Hence its frequency in London before the great fire,‡ and in most of the old cities of Europe; and hence the frequent appearance of the yellow fever, originating near the docks and wharfs, in the suddenly raised and ill drained towns of America. The prevention of these diseases has been effected, where the proper measures of draining, and good paving, and general habits of cleanliness, have been fully adopted.

The arguments adduced by Dr. Adams to prove the non-contagious nature of the plague, in chap. vi. are only intended to shew that it is the '*contagious habitation*,' and not the person of the sick, which is avoided in the countries, where that disease is prevalent. But, surely, this proves no more than what Dr. Lind long ago remarked, with respect to typhus, that *fomites*, on which the contagious effluvia are accumulated, are more dangerous and virulent, than the

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* Haygarth on the Small-pox, Vol. I. p. 79.

† Letter to Dr. Percival, p. 81.

‡ See Report on Dis. in London in our first Vol.

clean person of the patient.* Some of Dr. A.'s observations respecting the imperfection of quarantines, are worthy of attention: and the following paragraph puts the true view of the subject in a strong light:

'Thus, in all the diseases which depend on the atmosphere, whether at particular seasons or otherwise, it is certain that their frequency and violence depend on the manner in which the human race is congregated. In most of them, free ventilation and cleanliness, if not a certain, is at least a considerable preservative. In all, an improved diet, cloathing, sufficient fuel, the absence of dejection, and the prospect of an improved condition, are the means of prevention, or of cure. It is highly satisfactory, that all these are progressively increasing among us; and we may, without indulging any romantic opinions, look forward, if not to the entire extinction of the diseases enumerated, at least to the continuance of their gradual diminution. What is still more agreeable, is, that this diminution has been hitherto brought about, and must be increased, by our improvement in all those social virtues, which the philosophy of the ancients inculcated, and without which, every religious profession would not merely be suspected, but be held in abhorrence.' p. 36.

We dwell with pleasure upon this topic, although there is nothing novel in the view above exhibited: it is the same which Dr. Haygarth has laboured to impress upon the public mind, by inference from experiment, and which Dr. Heberden has deduced from historical record: it is the same, which we attempted to illustrate in the 'Report,' in Part III. of our first volume. It is a view of the triumph of science and civilization over the worst of the physical evils of the social state. The prospect, however, is considerably clouded, by the subsequent representations of Dr. Adams. While the infectious epidemics have thus been almost exterminated in Europe, 'we have witnessed a melancholy increase of mortality from the contagions.' p. 58. chap. vii. The scarlet fever, measles, and small-pox, are the contagious diseases to which Dr. Adams alludes; and he advances the seeming paradox, that these contagions are more extensively diffused,

* On Fevers and Infections.

and retain their influence to a greater distance, 'in proportion as the atmosphere is more free from other impurities.' p. 59. But although there is some plausibility in this observation, which, in regard to small-pox at least, is as old as Plott's History of Oxfordshire, we cannot consider it as supported either by fact or analogy. Dr. A. admits that these diseases, like the infections, are more fatal in crowded places, hence especially fatal in the close and dirty habitations of the poor; p. 75, and 78; and that, in consequence of our recent improvements, although the contagions have become more universal, their fatality has been diminished, comparatively with the number who suffer those diseases. p. 78. Now, is it consistent with any analogy to suppose, that the increased propagation, and diminished fatality of these diseases, are the result of the same causes? Is it not more correct to consider, that the contagions, like the infections, (we use these distinctions, without contending for their propriety,) are both diminished in influence by the same improvements of society, but that the contagions being more virulent, and active in much smaller portions, and perhaps less destructible, continue to operate when the infections become inert? Nor, with respect to scarlet fever, is the opinion supported by fact. In maintaining the disease to be of modern occurrence, on the authority of Dr. Willan, Dr. Adams leaves out of view the pestilential and mortal prevalence of the disease in its worst forms, in various parts of Europe, from the end of the 15th century downwards, as demonstrated by the same author. Yet in these periods of its devastations, the infectious epidemics were also produced by the crowded and filthy population of towns in general.

With respect to the prevention of scarlet fever and measles, Dr. Adams is not able to suggest any successful expedient; and, on the whole, would prefer exposing children to the contagion, after due preparation, in the summer months, when the diseases are mild.

At length we come to the consideration of the means of exterminating small-pox; with a view to which, the preceding pages have, doubtless, been put together, not after 'long de-

lay,' but hastily, from the author's common place-book. The two concluding chapters, in which this topic is discussed, contain some curious specimens of logic; in which the author stands forward the avowed defender of small-pox inoculation, and 'damns with faint praise' the practice of vaccination, which he once unequivocally advocated, and which even now he does not pretend to say has lost his favour, in consequence of any failure in the evidence, which he was instrumental in propagating. Nay, he admits that we have unquestionably a better prospect of exterminating small-pox by the introduction of vaccination. 'Whenever that practice becomes universal, there will be no subjects left for small-pox; and at this time, *such as are satisfied with it* may secure themselves and their children.' p. 89. Yet, with this conviction on his mind, and aware, that 'few people see enough of the world to enable them to judge impartially of contradictory evidence; and that, whilst the mind is thus kept in suspense, it listens eagerly to every suggestion which strengthens its doubts, and serves as an excuse for its want of decision,'*—Dr. Adams, so far from attempting *now* to satisfy the public mind, actually endeavours to increase its doubts and suspense, not only by his publications, but by sticking on the walls of the public room at the Small-pox Hospital, the reasons for recommending the continuance of variolous inoculation!†

——— 'hinc spargere voces
In vulgum ambiguas.'

Dr. Adams states several facts to prove the difficulty of avoiding the contagion of small-pox, and the certainty with which the contagion propagates itself, even in new cities, like Petersburgh; but in old towns, he affirms, the contagion is so multiplied, and the articles of clothing, furniture, &c. so generally impregnated with it, that, even if all the present generation were vaccinated, it would not be sufficient for the extermination of the disease. p. 92. This statement is just, without doubt. But could any one suppose, that an in-

* Answers to all the Objections, &c. p. 11. † See Blair's 'Hints,' p. 221.

ference in favour of continuing small-pox inoculation, without restriction, is hence to be deduced. Because you cannot easily get rid of the existing sources of contagion, *therefore* you may increase and multiply them to an indefinite extent, without adding to the mischief, were indeed a singular specimen of sophistry; and of course must require a string of sophisms, not less singular, to support it. Thus Dr. Adams *reasons* against any restriction upon inoculation.

'Is there any one hardy enough to propose that an experiment for purposes, however laudable, should begin on the human subject, instead of furniture, burying-grounds, and other inanimate matter? First, remove these sources of contagion, which, before the introduction of inoculation, rarely left any person six years free from the disease; and then, before you enforce your restrictions, reflect that you are only reduced to the state of those countries, which had been for ever, or for a long series of years, exempt from this calamity. Such are the nations who had never seen Europeans, or had seen them only after long voyages. Let us see whether the security of such is sufficient to leave the inhabitants of the world's emporium at their ease, whilst they or their friends remain susceptible of small-pox infection?' p. 92.

The first member of this paragraph is a mere *petitio principii:* if the experiment is proved to be safe and beneficial, no matter where it begins. The whole of this argument is built in some measure on the notion of the indestructibility of the poison, deposited in fomites, provided continual additions are not made to it, which remains to be proved. Indeed there are facts on record, which greatly invalidate such an opinion. Dr. Lind, after stating that some of the constant attendants about the sick in small-pox 'have never been infected,' observes, 'What is still more extraordinary, not only the *small-pox* and the *plague,* but other contagions, which I have known to rage in ships and prisons, after exerting their utmost violence, will sometimes *abate* by degrees in malignity, and at length *stop*. Have they exhausted *themselves,* or the *subject?* That they do not always exhaust the *subject,* is plain from facts, and our experience. Thus, although the infection of the *small-pox* was pent up entirely in the Royal George, among eight hundred and eighty men; yet this contagion disappeared altogether at sea, seve-

ral months before the ship put into any harbour, after having destroyed four or five persons, and left near one hundred unattacked. It had unfortunately been introduced into that ship by a boy, who lodged in a house where the small-pox was.'* Besides, the process recommended by Drs. Johnstone, C. Smyth, and Mr. Morveau, has never been fully applied, as far as we know, to the destruction of variolous contagion. Dr. A.'s conclusion rests upon the supposition, that vaccination will not be resorted to, and that inoculation is not to be practised under proper restrictions, but suppressed altogether. Dr. Adams himself, in August, 1805, affirmed, that, 'since the invaluable Jennerian discovery, there can be no objection to certain legal restraints on inoculation for the small-pox.'† But now, when it is affirmed, that, by preventing inoculation, we lessen one source of contagion, he says, 'it is my misfortune not clearly to comprehend the meaning of this position' p. 98. It is true, that he has pointed out the difficulties, in the way of exterminating this contagion, as well as of managing the restriction upon inoculation effectually; and these cannot be doubted, or denied to exist to a considerable extent. But to speak of difficulties, as insuperable obstacles, and to presume upon the impossibility of rendering vaccination universal, when the means of variolous inoculation were rendered troublesome and inconvenient, and the authority of the legislature had sanctioned the preference to that of the cow-pox, is as inconsistent with candour, as with sound reasoning. But, had this been all, we should have had less to object to the proceedings of our author. When,

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* Lind on Fevers and Infections, chap. ii. sect. 5.

† Still more lately, in furtherance of his wishes, he has reprinted in the Medical and Physical Journal, for Jan. 1810, the whole of his observations against restricting variolous inoculation, contained in the volume before us, under the title of 'Reasons for not interfering with the Inoculation of Small-pox.' The pretext for this republication is, that, in a journal, of which the author is an editor, no other '*impartial*' mode of bringing the work before its readers could be adopted. But those readers, who will consult the half-yearly 'Retrospect of Literature,' in the supplementary number of the 'Monthly Magazine, for July 1809,' published in the same quarter, may see how such delicacy vanishes under an anonymous mask.

however, we see him, who was once a warm and active advocate of vaccination, still professing the same conviction of its value, not only practically increasing variolous inoculation in the hospital to which he has become attached, but stating his reasons in favour of it, in placards, in the public room; then, with professions of preference for vaccination, employing half a treatise in describing the mildness of inoculated small-pox, under his management; and, lastly, ceasing to recommend the cow-pox, and coldly stating, that 'those *who are satisfied with it,* do right to recommend it to the world;' p. 97; at the same time, telling us, that 'those who are not yet satisfied with vaccination, are the only opponents of any restrictions on inoculation,' p. 90; and himself warning us against hastily deciding in favour of such restrictions, p. 98;—we are at a loss to decide, what is really the conviction which, in the midst of such inconsistencies, is most obviously paramount in the author's mind. But we find it more difficult to reconcile a belief in the efficacy of that benign and uninfectious preservative, vaccination, in a humane and conscientious mind, with a cessation from exertion in diffusing the blessing, both by practice and precept, among those whose mistaken fears and prejudices oppose the dissemination of private and public happiness.

We cannot conclude, without a word of disapprobation in regard to the affectation of classical erudition, the reality of which is refuted by the very attempt at the display. Dr. Adams has thought proper to quote six lines in Greek, in his title-page, from the beginning of the first Philippic of Demosthenes; in which short extract not less than *seven* gross errors are committed. One tense is put for another, ω for ο, α and ε for η, and such words as ηρεοσκε for ἤρεσκε, τυπων for τύπων, ουν βαινει for συμβαίνει, &c. occur. In the only other passage in which *five* Greek words are transcribed, (in a quotation from a lexicon,) *four* of them are wrong; viz. three derivatives of δημος out of four, are written with the ε, and the word επιχωριοι, with an ο in the antepenult. p. 112. Dr. A. also writes *Terrencii,* instead of Terentii, p. 28. Yet he is so attentive to correct the errors of the press, of which he

was aware, that he has inserted among the *corrigenda*, the words *Plenus Cereris et Liberi*, which are correctly printed in the text, but without capitals, and in the ordinary letter. Query; why give the adjective a capital?

Art. II. *The London Medical Dictionary; including, under distinct Heads, every Branch of Medicine; viz. Anatomy, Physiology and Pathology, the Practice of Physic and Surgery, Therapeutics, and Materia Medica; and whatever relates to Medicine in Natural Philosophy, Chemistry, and Natural History.* By Bartholomew Parr, M. D. Fellow of the Royal Societies of London and Edinburgh, and Senior Physician to the Devon and Exeter Hospital. 2 vols. 4to. pp. 1686. Johnson, &c.

When Dr. Motherby first published his 'Dictionary,' the number of systematic works on the practice of medicine and the accessory branches of learning, was comparatively small; and the student was left to depend on the oral instructions of his teacher, or to collect, with great labour, from a variety of scattered sources, the elements of professional knowledge. The utility of a publication embodying these elements in a commodious form, and thus facilitating their acquisition, was certainly considerable; and Dr. Motherby executed his task in such a way as to obtain very general approbation, avoiding alike the unsatisfactory conciseness of mere etymological definitions, and the repulsive prolixity of detail in which some of his predecessors in the same department of literature had indulged. His work, accordingly, passed through no less than five editions; the last that appeared in the author's life-time, being edited by Dr. George Wallis in 1793. Since that period, an entire revolution has been effected in one of the auxiliary sciences, by the application of improved methods of research; the study of physiology has been placed on a more solid footing, and disencumbered of the mass of conjectural opinions by which it had been so long obscured; while the practice of the art has been simplified, and rendered more perfect, by the accuracy

and sobriety of reasoning which has characterized the proceedings of inquirers in all its different branches. Amid these important changes, it is evident that the Dictionary of Dr. M. could no longer maintain its former rank; and it appeared desirable to the Editor of the present volumes to republish it with those omissions, additions, and improvements, which the progress of the science had rendered necessary. How far his labours have been well directed we shall now proceed to consider.

In the first place, we must be permitted to express our doubts, whether such a republication was called for at a time when those obstacles to the acquirement of medical learning to which we have adverted, have been in a great measure removed; and, if called for, whether Dr. Parr has acted wisely in following so exactly the plan, and in retaining so much of the original. It is sufficiently obvious, that however convenient a *dictionary* of medicine may be for the purposes of casual reference, it can never, without extending to a most unwieldy size, give that full and satisfactory information to which a physician, or surgeon, would choose to trust on points of practical importance. In this view, therefore, it is nearly useless: it may be worse than useless, if too much reliance should be placed on the imperfect instructions which it contains. With regard to anatomy, botany, chemistry, and materia medica, the case is nearly similar; for, we believe there is not a student, with a guinea in his pocket, who does not provide himself with some of the many manuals of those sciences, to which he can resort as occasion may require. The usefulness, therefore, of a large portion of Dr. Motherby's compilation is, in our opinion, superseded by the abundant supply of treatises, in every department of medicine, with which we have, of late years, been furnished; and the present editor might have spared great part of his exertions, without any detriment to his own fame, and to the manifest advantage of all those who may purchase his volumes. We have examined them with, perhaps, a more scrupulous attention, than their importance demanded; and have risen from the perusal, feel-

ing nothing but regret, that so much industry should have been wasted, and so much perseverance misapplied.

The reader is informed in the preface, that ' this work is not the design of a moment; projected in the eagerness of youth, it is completed in the maturity of experience;—a deposit of the accumulated stores of reading and observation.' But if Dr. Parr had digested his scheme a little more, before he commenced his operations, we think he would have seen the impropriety of making Motherby the ground-work of any new medical dictionary. It is true, that, after a considerable part of the first volume had been printed, he so far discovered his error, as to perceive the necessity of rejecting many of those antiquated articles which he at first proposed to retain; but he ought to have gone much further---he ought to have entirely altered the plan, and, instead of swelling the dictionary by extracts from books which are in every body's hands, to have reduced it in size, by confining himself to definitions and a list of references, such, for instance, as we find in the Lexicon of Castellus. At all events, his ' eagerness' (for, notwithstanding the assertions in the preface, we must use the term) might have spared us the mortification of an Appendix under the title of ' Curæ Posteriores,' extending to not fewer than 156 pages, and supplying the deficiencies, or correcting the errors, of the body of the work.

There is, however, one circumstance, which, to our minds, seems almost to prove Dr. Parr's total unfitness for the task which he had undertaken. In a publication which is designed to exhibit a summary of all the opinions which have ever obtained any currency in the medical world, we naturally look for the most decided impartiality; yet, we find Dr. P., in his character of dictionary-maker, enlisting under the banners of a particular school, and boldly avowing his undeviating attachment to it! Speaking of the nosological arrangement of Angina, he observes, ' if ever there was a man, to whom medicine was particularly indebted as a science, who, by enlarged and comprehensive views, has added to its value, its utility, and importance, THAT MAN

WAS DR. CULLEN. *Our pages will form an ample commentary on this text.*' Afterwards, indeed, the doctor seems to hint, that the Cullenian System was not so very original, and that the author borrowed more from Hoffmann and Stahl than he was altogether willing to acknowledge; but, his 'pages' still continue the 'ample commentary' on the 'text,' and in one place his fondness for his teacher leads him into a very ridiculous blunder. In the article SENSATIO, we find the following remark:

'Dr. Cullen observes, (and we mention his name particularly, as these opinions have been publicly attributed to Dr. Hooper,) that the four first genera of sensations, viz. seeing, smelling, hearing, and tasting, give no indication of the nature of the bodies; but, that the sensations arising from touch correspond with the peculiar state of the impressing body, both with respect to *bulk*, *size*, *hardness*, *impenetrability*,* rest, and motion.'

Now, it unfortunately happens, that 'these opinions' belong neither to Dr. Cullen, nor to Dr. Hooper, but are, at least, as old as the distinction of *primary* and *secondary qualities*, and may be found illustrated at full length in the Essay of Locke; in studying which, we think the editor of a medical dictionary would not have greatly mispent a portion of his time. But after a man has become the devoted adherent of a sect, he naturally discovers in its founder every perfection, and looks up to him, with pious veneration, as the source of all human learning. Accordingly, we have before us a disciple of Dr. Cullen, eulogizing his master as the restorer of medical science, and the most comprehensive medical genius whom the world ever saw,—forgetting, that he had been preceded by a Sydenham, a Baglivi, a Boerhaave, and a Hoffmann; and that he lived in the same age with a Haller. That Dr. Cullen was a man of considerable erudition and no common talents,

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* Not having the Physiology of Dr. Cullen at hand to refer to, we cannot say whether those words which we have distinguished by italics are really used by the learned professor, or not; but Dr. Parr would have done well to explain the difference between the impressions of bulk and of size, of hardness and of impenetrability.

we are not disposed to deny; but we believe, that the modesty of his pretensions kept pace with the extent of his acquirements, and that he himself would have been the first to disclaim such extravagant encomiums, as those which the editor of the present volumes has passed upon him. Certain it is, that, in the preface to his First Lines, he professes to tread in the footsteps of Hoffmann; and whoever will take the trouble of comparing the doctrines of the two authors, will find that the improvements which Dr. Cullen introduced, were neither numerous nor important. But, even if his theoretical views had been more consonant to sound observation and rational induction, than they are now generally allowed to be, still it would have been indecorous for the compiler of a dictionary to obtrude them continually upon his readers, to the almost utter exclusion of other theories and systems.

It might naturally be expected, that the chemical articles in this new edition of Dr. Motherby's Dictionary would exhibit the greatest alterations and improvements. These we have carefully examined, but without discovering in them that neatness and perspicuity of arrangement which it would have been so easy to have imparted, with the many helps which Dr. Parr possessed. The accounts which are given of the *bile*, of the *blood*, of *digestion*, and of *respiration*, (which last is discussed in the space of 3 pages, while a sheet is allotted to the article Aquæ Medicinales,) can satisfy no one who has it in his power to refer to the work of Fourcroy, or to the Systems of Dr. Thomson and Mr. Murray. In the article Barometer, the editor has quoted the arguments of De Luc in opposition to the received opinion, that persons ascending to great altitudes experience great inconvenience from the increasing rarity of the air; but has most unaccountably omitted to notice the interesting statements of Saussure, Bouguer, and Acosta, in proof of this well-established fact. Some of Dr. Parr's own remarks, indeed, incline us to suspect, that he is not a greater proficient in chemistry, than in metaphysics; and that he would have done wisely, if he had left his readers to search for chemical knowledge under more experienced guides. Thus, in describing

the effusion into the trachea, which takes place in croup, he remarks,

'The labours of physiologists have discovered lately a new ingredient in the blood, which they have called fibrin; which concretes in a fibrous substance, sometimes membranous, and has even been suspected of possessing a portion of irritability. It is undoubtedly this substance which is effused; but why inflammation, at this particular period, should occasion the exudation of *fibrin rather than of gluten;* why this should occur at an age when fibrin is not peculiarly abundant; and why a portion of the blood, which contains the largest share of azote, should be separated at a time of life when this principle is in a small proportion, are difficulties that we cannot surmount.'

From the experiments of Fourcroy on the blood of the fœtus, we suppose Dr. P. thought himself warranted in concluding, that the blood of infants contained but a small portion of fibrin: but what he means by the 'exudation of fibrin, rather than of gluten,' we are wholly at a loss to conjecture. In hopes of further explanation, we turned to the article GLUTEN, but found the definition to be merely, 'that part of the blood which gives firmness to its texture,' consequently the *coagulum*, or the *fibrin*.

The more strictly medical parts of the volumes now under review are chiefly compiled from the most familiar authors; but interspersed occasionally with the observations of the editor, few of which display much acumen, or very elaborate research. In a dissertation on *fever*, upon which the doctor seems to plume himself, we have an awkward exposition of the *ratio symptomatum*, on Cullenian principles, modified, without being much improved, by Dr. Parr. 'Debility and an altered determination, or, in other words, a change in the balance of the circulation,' are assumed as the proximate causes of febrile disorders; and the author hazards the assertion, that in fever there are 'never any appearances of increased action, except in the sanguiferous system.' If, however, he had been more free from the shackles of a theory, and had investigated more minutely the state of the different organs in the disease, he would have found, that the brain is often incited to increased action, as in delirium; that the

lymphatics perform their functions with great energy, as is proved by the rapid absorption of fat; that the peristaltic motion of the intestines is sometimes unusually great; and that in certain stages of fever there is an increased secretion of urine, an increased action of the lungs, and an increased exudation from the surface of the body. In the account of the cure, we were struck with the admission, that Dr. P., notwithstanding his opportunities, as senior physician to the Exeter Hospital, has never made a proper trial of cold affusion; and our readers will scarcely credit us, when we inform them, that 'Cullen's First Lines' is the only new reference which Dr. Parr has added to Wallis's edition of the article FEBRIS.—*Mania* is defined to be 'an irregular exertion of the mental powers, particularly those of perception and judgment, without fever, often with great violence.'—'Life,' says our author, 'is superadded to organized matter; for organization itself will no more produce it, than the most skilful union of the wheels will produce a time-piece without its spring.' In what form is life 'superadded to organized matter?' or how can Dr. Parr know whether any thing be superadded or not? He may just as well assert, that after a time-piece has its wheels, and its spring, and every part complete, life must be superadded, to enable it to go.——The description of the *Yaws* is very imperfect, and the editor expresses his doubts, whether there be any difference in the diseases which have been distinguished by this name. It is now ascertained, that there are some very essential differences, and that two distinct disorders have been confounded under the same denomination; the one endemical only in a small district on the coast of Guinea, from whence it has been transplanted to other places; the other endemical throughout the whole of Africa, and also in the East Indies. The former is known by the name of *Pians*, and appears first on the skin, especially about the genital organs, under the arm-pits, and on the flanks, accompanied by phagedenic tubercles, under which arise those spongy excrescences that have given origin to the term *frambœsia*; in the advanced stages it is combined with *mollities ossium*, and it frequently terminates in *elephan-*

biasis, or the *mal rouge*, but is never cured without the assistance of art. The latter, on the other hand, is the *Yaws*, properly so called, the eruption in which is preceded by pains in the bones, and commences generally about the neck, the pustules resembling those in small-pox, and containing pus, while the tubercles in *pians* discharge only ichor; no spongy excrescences succeed in their site, and if the disease continue long, the bones become carious: a natural cure sometimes takes place.*

If we have hitherto confined ourselves chiefly to an exposition of the faults of Dr. P.'s performance, it is not because the execution is equally defective throughout. On the contrary, the botanical and dietetic articles, and those relating to the materia medica, appear to be compiled with care and precision; though to those who possess the Edinburgh Dispensatory, or Murray's Apparatus Medicaminum, they cannot be considered as of much use. The following advice to our surgical brethren, we give, as affording a favourable specimen of the author's style, and as not unworthy the attention of some of those to whom it is addressed.

'The surgeon should reflect, that he will always merit greater praise from curing without an operation, than by an operation performed with the greatest dexterity. Unfortunately, many surgeons suppose that the operation is their chief business; that by it their character obtains a degree of splendour, which the best and most successful plan of cure would not otherwise claim. Let the young surgeon disregard this delusive splendour, which will entice him often to his patient's injury. On the other hand, let him not too long delay an operation that may be necessary, or protract to the moment of exhausted strength, what requires some efforts of the constitution to bear or contend with. Each fault is too common.'

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* These diagnostic signs, which we have abridged from Dr. Sprengel, we are the more anxious to point out, as medical writers in this country have taken so little pains to investigate the nature of these very remarkable complaints. We hope that, at some future period, we shall have an opportunity of entering more fully into the disquisition, than the limits, to which we are necessarily confined in the present article, will allow us to do.

'Humanity is, above all, required to complete this first of characters, a good surgeon. In general, surgeons are proverbially cruel, and they must often be so to fulfil their duty. Yet there is a tenderness of manner that makes even cruelty tolerable; in comparison, amiable: and though the surgeon ought not to feel, he should as much as possible lessen, the patient's pain, and appear to be sensible of his sufferings. A softness of manner, a gentleness of voice, and even a delicacy of form, are not without their effect; and whatever can alleviate distress, though trifling in the general scale, should not be neglected. To the one the patient looks with horror, as the butcher; to the other, as the ministering angel, bringing balm on his wings to heal and to save.'

Considered, however, as a whole, it is not in our power to speak favourably of the 'London Medical Dictionary,' or to recommend it as a work creditable to the age in which it is produced. Besides those general objections which we have to the plan, some others of minor importance have occurred to us in the perusal of Dr. P.'s volumes. It struck us as somewhat extraordinary, that while the editor was professing to follow the new system of chemistry, and to incorporate all its doctrines, he should betray such a partiality for the ancient nomenclature, as to describe mercury under the name of *argentum vivum*, copper under *æs*, and some of the preparations of the latter metal, and of iron, under the terms *Veneris Tinctura, Veneris Volatilis Tinctura, Mars solubilis, Sal Martis, &c.*; but still more, that he should have deemed it necessary to retain and often make distinct articles of the old Arabian alchemical names; such as ALACAB, ALATI, ALAMAD, ALAPOULI, ALATAN, ALHANDAL, ASAB, ASABON, BELI, BUARACH, &c. all which he might have safely left the uninitiated to search for in the writings of the adepts. The abbreviations of titles of books, too, as ACT. MED.—ACT. S. R.—B. THEATR.—BREYN. CENT.—BREYN. HIST. COCC.—BREYN. PROD.—BREYN. SCHED., &c. might have been omitted with equal propriety. Nor would it have detracted much from the value of the work, if Dr. P. had been less eager to display his etymological skill, as, where he has aimed at originality, his attempts have not been very successful. Thus

amor is said to be derived from the Hebrew HAMAH, *to burn*, or AM, *a mother*; 'because love is the natural passion of mothers to their children:' but this is exactly the sense in which the term is least used. Among the Romans, it was, if we mistake not, more commonly expressed by the phrase *affectio erga fetum*, or by the word *mater* itself. *Apparatus* is described as coming from *appareo*, to *appear*, whereas it evidently has its origin from *apparo*, to *prepare*; *gluten*, a term respecting which, as we have already seen, the editor's ideas are not very precise, is derived, 'quasi *geluten*, from *gelo*, *to congeal*.' Where Dr. P. found the participial monster, *geluten*, we cannot divine; but, we think any tolerably good latin dictionary would have informed him, that *gluten* meant something *viscid* or *tenacious*, and that *gelo* signified *to freeze* or *harden by cold*. *Morbus* is referred to μοχος, death; and *quacksalber*, a compound word, is given as the root of *quack!* These are but a few of the many fanciful etymologies which have struck us in perusing the dictionary, and which are certainly disgraceful to any man of learning and sense. We cannot, however, dismiss the subject, without presenting one more specimen of the same sort, leaving it to our readers to conjecture for what great purpose such an article was introduced into a medical dictionary: 'BRONTE (quasi βρονλη, from βρεμω, *to roar*,) Thunder.—*Was it from hence Lord Nelson derived his title?*'

The only thing which remains to be noticed in these volumes, is the collection of plates with which they are enriched, and which consist of views of the different parts of the human body, and of the most common surgical instruments. They are neatly engraved, and are perhaps the most valuable part of the book; but the question still recurs—Why enhance the price of the publication by an addition, which can be of only partial use, and which can give little satisfaction to any one who wishes to acquire a perfect knowledge either of anatomy or of operative surgery?

ART. III. *Observations on the Proceedings and Report of the Special Medical Board, appointed by His Royal Highness the Commander in Chief, and the Right Hon. the Secretary at War, to examine the State of the Army Depôt Hospital, in the Isle of Wight. Interspersed with Instances and Proofs of Gross Misrepresentations contained in various Publications by Dr. Jackson.* By Thomas Keate, Esq. F. R. S. Surgeon General to His Majesty's Forces, &c. 8vo. pp. 155. Hatchard.

ART. IV. *A Letter to the Right Hon. Sir David Dundas, K. B. Commander in Chief of all His Majesty's Forces.* By Robert Jackson, M. D. late Physician to the Forces, and Head of the Hospital at the Army Depôt. 8vo. pp. 36.

ART. V. *Observations on the Fifth Report of the Commissioners of Military Inquiry; and on the Army Medical Department; in a Letter to the Right Hon. the Secretary at War.* By Andrew Halliday, M. D. 8vo. pp. 38. Murray.

ART. VI. *A Letter of Remonstrance to the Right Hon. the Earl of Chatham, Master General of the Ordnance, &c. on the Nature of the Office of Inspector General of Ordnance Hospitals; its Injustice, and mischievous Effects, as a Piece of Patronage.* By Machaon Walcherensis. 8vo. pp. 21. Sherwood, Neely, and Jones.

ART. VII. *An Analytical View of the Medical Department of the British Army.* By Charles Maclean, M. D. Lecturer on the Diseases of Hot Climates. 8vo. pp. 200. Stockdale.

IN the first volume of the Register we entered very fully into the merits of the question concerning the appointment of the medical officers of the army, which had begun to attract such general attention; and the subsequent information which we have collected, has certainly not induced us to alter the opinions then advanced, or to abandon the determina-

tion, that a reform in the Medical Board is essentially necessary. On the contrary, this judgment has been strengthened by several additional facts, which have since come to our knowledge. We shall, therefore, briefly state the nature and objects of the pamphlets before us, and suggest such remarks as arise from their perusal.

Mr. Keate, it will be recollected, objected to the proceedings of a special medical board, appointed to examine the state of the hospital, at the Military Depôt, in the Isle of Wight, on the principle that they were 'ex parte,' and that the board had not allowed itself sufficient time to perform the duties for which it was instituted. The gentlemen who composed that board, however, were so entirely satisfied with their conclusions, that they actually published their Report, in spite of a letter from Mr. Keate, explanatory of his objections. This gentleman, then, has felt himself called upon to refute what he deemed an unjustifiable and hasty statement. As this chiefly relates to the conduct and practice of Dr. Jackson, of whom we had occasion to say much in our former pages, we shall not renew the controversy: but justice to Mr. Keate obliges us to observe, that his animadversions on the Special Board appear to be well founded; that the members of it obviously favoured Dr. Jackson; and that they did not investigate the causes of the great mortality, nor the treatment of the patients at the Depôt Hospital, with sufficient attention and impartiality.

Dr. Jackson's letter to Sir David Dundas proves nothing. It is singular that this gentleman should persevere in issuing such fruitless publications from the press; for, instead of convincing us that he has been hardly treated, they induce us to pity the feebleness of a Board, that suffered him to remain in office after his conduct became known. Finding his power of reasoning ineffectual, he has had recourse to that last resort of mental imbecility, the 'argumentum bacculinum;' he has tried the strength of his arm on Mr. Keate's back, for which he is now suffering confinement in the King's Bench prison—'Est ubi pœnas dat procax audacia.'

After the treatises of Dr. Bancroft and Mr. Keate, we see

no necessity for Dr. Halliday's observations on the Fifth Report; they contain no additional information; they place the subject in no new point of view; they are destitute of spirit, and strength of argument; and seem written chiefly to advocate the measures of Mr. Keate and Mr. Knight, upon both of whom much praise is wasted. Thus, at page 16, we are told of 'the present most excellent and economical system, introduced into regimental hospitals by Mr. Knight, the inspector-general, to whose exertions the army and the nation owe much,' &c. In one place, the surgeon-general is praised for his economical arrangement; and in another, he is lauded for *not* having 'acted upon the parsimonious, though fashionable, principles of the present day.' When he could not trust to his own judgment, in selecting and supplying medicines, he is commended for applying to an apothecary, who might know better; and, poor man! he is pitied for not having been allowed more clerks to enable him to perform the very heavy duties of his office. Still he got through them to the entire satisfaction of Dr. Halliday, 'though labouring under every disadvantage.' If, by disadvantage, the doctor mean, that Mr. Keate undertook to perform duties, for which, as a surgeon, he was not qualified, we agree with him: but that the surgeon-general was not overdone with labour, would appear from his having time for private as well as public practice, and even for officiating in the department of the physician-general.

One proposal of Dr. Halliday's, for which he is indebted to Dr. Bancroft, requires a little consideration. He thinks, 'that one or two general hospitals, with scientific men attached to them, would form by far the best school for army practitioners; where young men, either in the character of hospital mates, or medical cadets, would acquire such a knowledge of disease, and (what appears not less important with the commissioners) of army medical practice, as to fit them for any situation in the service. If a system of this nature was once adopted, and men of known abilities and experience in army medical practice [were] allowed to be the judges of the acquirements of the pupil, the medical cadet

might then rise, in regular gradation, from the lowest to the highest appointment in the service, without incurring any risk of persons unqualified reaching the head of the staff; promotion might then go by seniority in the service, without endangering the health of the soldiers. The army would thus be made the school of its own officers, and none ought to be promoted, but those who had qualified themselves in this school.' p. 17. We should hardly have noticed this very weak scheme, did we not live in an age when we think it quite possible, that an administration might be found with whose capacity such a plan would accord. The sentence, 'and none ought to be promoted but those who had qualified themselves in this school,' is especially inviting. As the experiment has not yet been made, we can only offer some objections against the probable efficiency of the plan. It has been found, that troops are best supplied with cloathing and other necessaries, by open contracts, and not from manufactories purely military, and under the authority of government. It is much easier, however, to fabricate broad cloth, than to fashion medical officers: the supply of these must be difficult in proportion to the necessity of their being well educated; yet it is proposed to establish a government manufactory for 'hospital mates or medical cadets, who might rise in regular gradation to the highest appointment in the service.' The institution of one or two large hospitals for this purpose, would certainly extend the patronage and augment the power of the members of the Medical Board. They would frequently have an opportunity of rewarding some superannuated officer, or some young favourite of fortune, with the office of instructor to the raw recruits in their medico-military duties. The promotion of the pupils, though nominally according to their seniority, would depend on their *prudent* conduct; and thus the Board would be effectually secure from the impertinent observations and malicious accusations of inferior officers. No offensive complaints of misconduct would, in future, reach the war office; and there is every reason to believe, that strict subordination, and profound attention to the word of command, would obtain

throughout the medical department of the army. No new discovery in medicine, no improved method of cure practised in civil life, would interrupt the steady discipline and established practice of the military school; veterans, grey in the service, would be spared the mortification of learning new modes of treatment; and young men would have the advantage of being taught principles and practice, that had long been abandoned in the universities.---But, unfortunately, men of talent will not always submit to the wise regulations proposed for their guidance. If, by accident or mistake, a young gentleman should get smuggled into one of these medico-military manufactories, and find, what must sometimes be the case, that the instruction to be derived, was inadequate to his expectation, no hope of preferment would induce him to waste his time, whilst any other medical school was open to him. Besides, it can never be expected, that students of even moderate capacity, would attach themselves solely to one hospital, and one set of lecturers; and, by completely separating military from civil practice, many men would be deterred from entering the army at all; and, instead of being recruited from the whole body of the profession, the choice of medical officers must be confined to the few obscure, humble-minded youths, who would submit to the degradation of military restraint, during their study of a liberal calling. The attempt to persuade men in power, that the diseases of soldiers differ from those of other people, and therefore require so marked a difference of treatment, that none but military practitioners are capable of prescribing for them, is highly absurd and mischievous. If, indeed, soldiers are not to be treated like men, but, when sick, are to be bled till they faint, then dosed with drastic purges, and plunged into hot and cold water indiscriminately, at the mercy of an uneducated man who calls himself a physician, which notoriously has been the case,—then, truly, we must admit, that such practice does require practitioners versed in very different arts, and possessed of very different principles, from those which obtain in civil life. We have heard much of military diseases, and something of army medical practice; but we know, that soldiers in general

are young men of strong and healthy constitutions, whose diseases are chiefly occasioned by climate or intemperance; and these will be best investigated and cured according to the principles taught in the schools, rather than by the rash modes of a prejudiced individual.

The Letter of Remonstrance to the Earl of Chatham, although anonymous, is entitled to consideration, both from the nature of the grievance to which it alludes, and the temperate manner in which the case is stated. It seems that the medical establishment of the Ordnance, like that of the Navy, and of the East India Company, is distinct from that of the line, and not under the control of the Medical Board. In this particular service, promotion has usually been the reward of seniority; and the anticipation of it was so certain, that although the inferior officers bear a much greater proportion to those of superior rank, than is the case in the line, and consequently they must wait a longer period for the expected reward, still, on every vacancy, candidates more than were necessary, offered themselves. In 1806, Lord Moira rather injudiciously instituted the office of Inspector-General of Ordnance for the purpose of rewarding the services of a respectable army physician. The appointment necessarily occasioned much discontent and dissatisfaction amongst the medical officers of the ordnance department,

'Had the late Sir John M. Hayes, in whose favour it was first made, been aware of the great unpopularity of this appointment, I question, (says our author, p. 6,) but he would have shrunk from the ordnance service. That a *stranger* should have been introduced into it, and placed in high authority over its *own old* officers, offended the sense of the regiment—a regiment, the customs of which inculcate a strict observance of promotion by seniority.

'Under such disadvantages was the late worthy baronet introduced to the regiment of artillery; and it is certain, that, if private worth could redeem the irregularity of his introduction, or gentlemanlike and liberal conduct silence the claims of self—if the measure was not imprudent, and the precedent injurious, the medical establishment had but little else to regret his appearance at its head.' p. 8.

The fact was, that Sir John did not interfere in any of the customs or regulations, which obtained previously to his ap-

pointment. He considered his place as a sinecure, and very contentedly continued to reside in town on his four guineas a day, whilst 'The executive of the Hospital remained in the hands of the superseded, who therefore, if thus efficient, ought not, in the evening of life, to be degraded; and who, if inefficient, or negligent of their duty, ought to have been set aside in a proper manner.' p. 11. But they continued in office, and thus proved that the new appointment was unnecessary. When Sir John Hayes died, it was generally expected that this needless and expensive office would have been abolished; or, if continued, that it was to be the reward of some old and meritorious officer in the ordnance department. How great was the astonishment and vexation of the medical gentlemen in that service, when a Mr. John Webb was announced to the public as the successor to the worthy baronet in his rank and emoluments. Now, although nothing could be alleged against this gentleman, because, upon inquiry, nobody knew him; and all that has been said for or against him is, that 'he is young and obscure;' still his being advanced to this high situation, over the heads of long tried and experienced officers, is an insult to their merit, and an act of injustice to their services, which demands legislative interference. That Lord Chatham should make such an appointment is not astonishing; but, that he should have the power of degrading the ordnance medical officers, in particular, is a flagrant abuse. The late Commander-in-chief seldom interfered with the Army Medical Board, being quite aware, that it was difficult enough to know the duties of his own profession; and we think Lord Chatham would have acted more wisely, if he had not interfered in the affairs of a department of which he necessarily must be an incompetent judge, unless, indeed, he has devoted that time to medical studies, which should have been appropriated to military tactics.

The various subjects of which Dr. Maclean's publication treats, are as follow:

'1. The unfitness of the present members of the Medical Board, under any system, for the duties of their situations, arising from absolute ignorance of the most essential parts of military medical know-

ledge, notorious want of public integrity, immeasurable extravagance, and a decided disposition to despotism, tyranny, and oppression, in all the subordinate details of their operations.

'2. The unavoidable degeneracy of the establishment, in consequence of the disregard of every rule of promotion by seniority, into a system of favouritism, servility, and jobbing.

'3. Acts of individual injustice, &c.

'4. The pernicious tendency of a cumbrous, expensive, and mischievous inspectorial system, surreptitiously raised by Mr. Knight to its present extravagant pitch, for the sole purpose of creating patronage for himself.

'5. The Hospital Staff System; shewing that that also is unnecessary, or worse than useless.

'6. The comparative usefulness of General and Regimental Hospitals.

'7. Peculation. It will be shewn that peculation and fraud in the Isle of Wight have been connived at, and the proofs of these suppressed by the Medical Board.

'8. The scandalous and expensive job of the wooden building, called the York Hospital at Chelsea, and other buildings employed as hospitals.

'9. The criminal extravagance of the Medical Board, in respect to the quantity of medicine, wine, &c. and their no less criminal negligence, in respect to their quality.

'10. The pernicious effects of the interference of the Medical Board with army practice.

'11. It will be shewn, that four thousand lives, and upwards of 300,000*l.* of the public money, may be annually saved in this department, by the introduction of a proper system, and of proper persons to preside over it.

'12. A sketch will be given of a new organization of the establishment.' Introduct. p. xii.

The author concludes this *piquant* bill of fare with expressing his belief, that there is not an individual in his Majesty's dominions, who can view what he has 'thrown together,' without almost constantly experiencing the strongest alternate emotions of disgust and indignation. This has not been altogether the case with ourselves, for we have been considerably amused with many parts of Dr. Maclean's performance. He writes seriously, indeed; but, like some other

grave authors, oftener provokes the risibility, than the tears of his readers. Sometimes, however, he professes to be droll; but his little talent for humour is unfortunately cramped by the recollection, that he sat down to unfold a tale of woe. Still wit, like sparks, will break forth, and we consider the following passage as a favourable instance of our author's genius, and convincing mode of attacking the Board. Having charged it with the folly of sending wine to North America, &c., he facetiously observes:

'After so many absurdities, it ought not to surprise us if, upon a minute inspection, we were to find charges for sugar and molasses sent to Jamaica, Peruvian bark to South America, oatmeal to Scotland, and crutches to Ceylon. I find it is not easy even on so solemn a subject to preserve a becoming gravity.' p. 29.

The charge, however, immediately following, completely reminds the author of the necessity of assuming all his weight; for it is no less than that 'the members of the Medical Board have, *because it was the fashion*, ordered the surgeons of regiments to practise vaccination universally,* although it has been proved, over and over again, to be no security against small-pox,† and for having *the good sense* to omit this practice, was not Mr. Garratt, surgeon of the 14th regiment, obliged to quit the army?' They have also offended Dr. Maclean, by having 'laid down a formula for treating the itch,' of which, as the doctor very feelingly observes, 'every young hospital mate from Scotland must have more practical knowledge than themselves.'

We were curious to ascertain how, in these sickly times, £300,000 could be saved in the medical department of the army, and found that it was proposed, that each regimental surgeon be allowed (and Dr. M. considers it a very liberal allowance) £300 a year for each regiment of 1000 men, *i. e. six*

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* 'See Medical Observer.'

† 'See Medical Observer.'

This contemptible authority is continually referred to in the course of Dr. Maclean's publication. We are aware of the parties who conduct that work, and consequently entertain no apprehension of the cause of vaccination suffering in the smallest degree from its calumnious attacks.

shillings per man, for a year's supply of 'hospital and purveyor's stores, wines, malt liquors, and medicines!' Such propositions require no comment.

We presume, that, by this time, our readers will be convinced, that the Medical Board can sustain little injury from such writers as Dr. Maclean; for, although some of the facts which he states may be true, we cannot always depend upon the authority of a man, who has descended to personal abuse, and even gone so far as to challenge the two junior members of the Board; exempting Sir Lucas, merely on account of his age. See p. 159.

The doctor certainly establishes the fact, that, at nearly forty years of age, he was induced to accept the menial office of hospital mate, the lowest appointment in the service; but not meeting with promotion, and not much liking his situation, he wished to resign, and not being permitted to do so, he neglected to attend to his duties, and was consequently advertised as a deserter, with a full description of his person. This, doubtless, was sufficiently mortifying; but, if contrary to custom, redress surely might be obtained, without making an appeal to the public, which is seldom much interested in the affairs of discarded officers. Those who attempt to prove too much, generally defeat their own intentions; and we naturally suspect the ability or the integrity of a man, who seizes with avidity every means of vilifying his adversary, and will not allow him the merit of ever being in the right,

> "Che notando nel ben solo i difetti
> Suol cor la spina, e rifiutar la rosa."

Leaving, then, the petty altercations of interested individuals, we shall endeavour to establish our position, that a reform in the Medical Board is essential to the interests of the army. We deem this the more necessary; because, of the numerous pamphlets which we have perused on the subject, not one appears to be written on independent principles, but all seem to proceed from motives of private rather than of public interest.

The grievances which render a change in the Board desirable, in our opinion, arise from the supineness of Sir Lucas Pepys, on the one hand, and the undue activity of Mr. Knight on the other, whilst the surgeon-general appears to have acted too much in the department of the physician. We do not, therefore, object to the organization of the Board, but to its members, who, from incapacity, indolence, or selfishness, have swerved from their duties, and thus produced most of the evils which they were appointed to check. In proving these charges, we shall chiefly quote the authority of Mr. Keate himself. Dr. Jackson had long set the Medical Board at defiance, and acted directly contrary to their regulations.

'Having obtained the appointment of physician to Chatham Hospital, *without* the usual qualifications, he seems to have thought himself lord paramount in that place; and though Dr. Maclaurin was an army physician, and had been appointed such, after his qualifications were properly ascertained by the president and censors of the College of Physicians, and at a time when Dr. Jackson was only a regimental surgeon; the latter had, in his own opinion, grown to be sufficiently powerful to contemn his Majesty's commission, and to set himself above the Commander-in-chief and the Army Medical Board, by excluding Dr. Maclaurin from the duty which they had assigned to him, only because it suited his own (Dr. Jackson's) views, not to give his "confidence" to a man much better qualified than himself.' Observations, &c. p. 13.

After quoting part of a letter from Dr. Jackson, written in the most imperious and even threatening tone, Mr. Keate proceeds,

'Instead of making a formal complaint against this disrespectful language, and *insubordinate* conduct, as it would have been natural, and perhaps proper, for the Army Medical Board to have done, we continued to exercise our forbearance and patience, culpably, I fear, and *principally from deference and respect for those who had been induced to honour Dr. Jackson with their good opinions and patronage;* an honour, of which he ought to have endeavoured to render himself worthy; though it seems only to have rendered him presumptuous and contumacious, as is indeed too often the case with illiterate and uncultivated minds.' p. 24.

This acknowledgment proves, that the Board was influenced by patronage, and tamely permitted a worthy and able physician to be turned out of the situation to which he had been duly appointed. The physician-general was repeatedly addressed on the subject by Dr. Maclaurin, but 'returned *no answer.*' p. 21. *At length,* 'the Army Medical Board determined, that one of its members should visit and inspect the hospital at Chatham; and as this kind of duty had been *commonly* performed by me, (Mr. Keate,) and the physician-general did not, according to the terms of his instructions, then consider it as proper to be undertaken by himself without a particular order for that purpose, I was deputed by my colleagues to visit Chatham, and perform the desired inspection; attending particularly to the *medical treatment of the sick,* by Dr. Jackson,' p. 28, &c. This admission, also, that it was usually the duty of the surgeon-general to inspect the *medical treatment* of the sick under the care of physicians, militates strongly against the conduct of the Board. A strict injunction, however, was given to Mr. Keate, to conceal his private opinion from Dr. Jackson; and when the courteous members of the Board did communicate their sentiments, they were so ambiguously worded, that that ingenious gentleman interpreted them in his own favour, and actually asserted that Mr. Keate signified an unqualified approbation of every thing which he saw; and he, of course, proceeded as before, till at length the Board assumed vigour enough to represent the case to the Commander-in-chief, when the Special Board was appointed, and Dr. Jackson ultimately resigned.

We shall now inform our readers what the surgeon-general did see at the Depôt Hospital at Chatham. After describing the cleanliness of the wards, &c.; and noticing in the books, accounts 'of frequent and large bleedings, *hot* and *cold* baths, or (as was explained) cold water poured from buckets and large saucepans on the sick, immediately after coming out of the hot bath, followed by emetics and strong purgatives, particularly calomel and antimonial powder in large doses;' and observing, that some patients had recently died, in the early stage of fever,—

Mr. Keate 'was next conducted to the bathing-room, in which (he remarks) I observed several bathing-tubs, and was informed by the gentleman who accompanied me, (an hospital mate,) that the sick, on admission, were generally bled, frequently *until they fainted*, and were then placed in what strictly deserved to be called *hot baths*, covered with blankets to increase the heat; and when faintings or great languor occurred, they were taken out and suddenly plunged into a cold bath, or, in its stead, were dashed with buckets full of cold water; and that, as soon as the patient was put to bed, an emetic was commonly given, and at night a large dose of calomel, or some other cathartic, frequently combined or accompanied with James's powder.' p. 29.

When Dr. Jackson removed to the Isle of Wight, Mr. Keate states, that 'mortality fled with him.' After he took charge of the Depôt Hospital in that island, more than one death in nine of the patients under his care occurred; while only one died out of 66, under the care of the other medical officers of the army generally. p. 44.—We cannot, in justice to the parties concerned, omit quoting two or three specimens of Dr. Jackson's practice at the hospital, taken from the prescription book in 1801.

'Wm. Cameron admitted. Erysipelatous.
V. S. xv.
Natr. Vitr. ℥ij.
Baln.
Vespere.
V. S. ℥xv.
P. Dover. ℈i.'

'Wm. Greenhalsh admitted.
V. S. ℥xxv.
Haust. Emetic.
Baln. tepid. et frigid.
Calom. gr. viii. Pulv. Jacob. gr. vi. omn. 3tia hor.'

'Thomas Welsh admitted. Fever.
V. S. ℥xxv.
Baln. tepid. et frigid.
Haust. Emetic.
Calomel gr. xij. Pulv. Jacob. gr. vj. 3 hor.'

M'Williams admitted. Fever.

V. S. ℥xxv.
Baln. tepid. et frigid.
Calomel gr. x. Pulv. Jacob. gr. v. et rep. post hor. duas
Vespere,
Ol. Ricini ℥iß
Episp. Magn. Ventricu.
Enema Purgans.
Baln. tepid.
Camph. gr. v. Opii. gr. ß.
P. Jacob. gr. vi. M. sumat unum 2d horis.
Gill Wine.'

Dr. Jackson's practice, however, had the merit of being pretty uniform; for it appears from the books of Parkhurst hospital, that, from the 28th of July 1801, (a few days after the doctor's arrival,) to the 1st of September inclusive, 166 patients were admitted; 'that of these, upon the days of their respective admissions, 136 were bled; 148 underwent the operation of bathing, most frequently both hot and cold; 100 were vomited; cathartics, commonly strong, and sometimes drastic, were ordered for 90; and 28 were blistered.' No Spanish apothecary could practise bleeding more systematically; for even change of season made no alteration in this sanguinary plan. On the 28th, 29th, and 30th of December, 29 patients were admitted; and of these, '22 were bled, several of them very copiously; (one to the amount of 54 ounces at once, and three to 30 ounces each at once;) also, that 17 were bathed, 17 vomited, 23 purged, and 22 blistered (often in several places at the same time), and all on the day of admission.' For the information of the members of the Special Board, whose report was so favourable to Dr. Jackson, we shall also quote from Mr. Keate the doctor's method of expediting hospital business.

'Of the patients admitted by Dr. Jackson, commonly four-fifths, and often a much greater proportion, were bled, with very little discrimination. For the purpose of this operation, they were generally seated by the side of each other, on a long bench, to the number often

of twenty, and upwards, having each a ligature on one arm; an hospital mate then took a lancet, and beginning at one end of the row, performed the operation of bleeding upon each of these patients in succession, leaving the blood to run into buckets, porringers, &c. until he had done with the last; after which, returning to the first patient, (who was by that time commonly thought to have bled sufficiently,) he put an end to their several bleedings successively, in the same order as that in which the veins had been opened,' &c.

The description of their mode of bathing is equally amusing, if, indeed, any one can be amused with such deplorable details. It seems, that, of the patients who fainted in the bathing-tubs, none actually died in them, though such an occurrence not unfrequently happened a very few hours afterwards. In one of his publications, Dr. Jackson himself informs us, 'that four soldiers, ill of' what he calls 'fever in dysenteric form,' were put into the warm bath, in which they remained from ten to fifteen minutes; taken out, they were rubbed dry and laid in a clean blanket; they expressed a sensation of comfort as if in heaven,'—'they fell asleep, and two of them never awoke.'

The case of Dr. Borland is a still more flagrant instance of the inadequacy or culpability of the Medical Board; and more especially proves the evil consequences of Sir Lucas Pepys's inertness. Dr. Borland was not permitted to act as physician to the forces, because he was not a licentiate of the College in London. But Dr. Jackson requested his assistance, and Sir Lucas Pepys, with great good nature, replied:

'As I find you are anxious to have Mr. Borland with you, it has occurred to me, that, if you approve it, I would desire Mr. Keate to request his Royal Highness the Commander-in-chief to let the following arrangement take place at Chatham; viz. that Mr. Borland should be directed to act under your direction in the arrangements and other business of the hospital, of which there must be sufficient to do, and that the care of the *medical patients* should be *entirely trusted to you* and the *staff physician*, Dr. Maclaurin,' &c.

Accordingly, Dr. Borland was appointed 'assistant-inspector;' and the *regular* medical officers attached to the hospital were soon obliged to retire. Dr. Borland was suffered

to act as a physician, and, in the absence of Dr. Jackson, 'was intrusted with the *entire medical care* of Chatham Hospital.' This was well known by the Medical Board; but Sir Lucas Pepys was content with occasionally summoning the deputy-inspector to pass the requisite examinations, and he as regularly evaded them. 'How many lives (says Mr. Keate) were lost by this breach of faith, as well as of military discipline, cannot now be ascertained.' As Dr. Jackson, however, asserted, that Dr. Borland's 'education had been as good as that of most physicians,' and his 'experience greater than that of any mere physician to the army, we shall give two or three specimens (out of a great number which appear in the hospital books) of his method of prescribing; assuring our readers, that we have made no blunder in transcribing the *Latin*.——

'July 18. Simpson.
Ung. Merc. pro *capitem*.'

'July 19. Davis.
Empr. Episp. du*as* ad crur*is* intern*is*.'

'July 24. Hatfield. Post. V. S. ad ℥xij.
Haust. Æth. Anod. 3t*o*. horis
1 Pint Rum Punch.
Episp. du*as* ad crur*as* intern*as*.'

'July 24. Leaker.
Episp. dua applicr. ad tempor*um*.'

'July 25. Kelly.
Ungt. Merc. f. ʒij. Super femor*es* omni nocte.'

'Aug. 1. Crabtree.
Ab*d*rantur Capilli et applic*atur* V*e*rsicatorium magnum per *totam Capitem*
1 Pint Porter, 1 Gill Wine.
Omittr. omnia medicamenta.'

'Aug. 6. Sutton.
Calom. gr. v. statim
Vespere apud horam sextam sumt. Telæ Arachnæ gr. viij. apud

horam decimam gr. viij. et cras mane apud horam sextam incipr. sumere gr. x. omni hora—usque ad *temporem visitationis.*'

' Aug. 7. Sutton.

Very slight attack of fever this morning.

Measles shew themselves—*uncertain whether the reaction of another disease upon the system, or the power of the cob-webs has produced effect.*'

As assistant-inspector, Dr. Borland was equal in rank to a staff physician; but this was not thought sufficient, and Mr. Knight actually recommended and obtained for him, a full inspectorship, worth about £1000. per ann.: alleging the necessities of the service, &c. ' It was (observes Mr. Knight, in his letter to the deputy-secretary at war,) by such special urgency, that I was more particularly guided in my late recommendation of Dr. Borland, who, as *my* deputy in office, is frequently employed to officiate *for me*, on missions to different parts of the kingdom, where the rank and authority should be correspondent to the undertaking, and superior to those officers whom he is to control.' The appointment of such a man to superintend and control the practice of a regular physician, is an insult to common sense, and a violation of propriety, which fills the army with discontent and dissension. It is by no means a solitary instance: for Mr. Knight, since he came into office, has thought proper to nominate surgeons only to be inspectors; and even of these he has not selected the best qualified. The consequences have already been such as might have been anticipated; our troops have been treated worse than the unhappy victims of Sangrado; Mr. Keate himself does not even guess at the extent of the slaughter; and the poor men are deprived of better assistance, because physicians of merit can never be induced to remain in a service, which must be so peculiarly disgusting. The surgeons, also, are justly dissatisfied, because their operations and practice are subjected to the reprehension of men who are frequently very ignorant, and incompetent judges of the cases, of which they can have no knowledge.

We might, did our limits permit, adduce several other charges against the Medical Board; but those which we have already

enumerated, are, in our opinion, sufficient to prove the incapacity and misconduct of the present members of it. The supineness of Sir Lucas Pepys is the more reprehensible and remarkable, because, as President of the College of Physicians, he is peculiarly bound to protect and uphold the privileges of that learned body; and, as head of the Medical Board, he was interested in providing the army with the most efficient medical officers. He did, indeed, attempt this. He augmented the difficulty of becoming a physician to the forces, by permitting no one to enter who was not a licentiate of the college, or who had not taken the degree of bachelor of physic in an English university. This regulation would, at least, oblige army physicians to bring with them a little education: but, in the face of this, Mr. Knight, who had been a country apothecary, and afterwards surgeon to a regiment, upon being made inspector-general, appointed men of inferior endowments, and of lower rank, to situations which ought to have been the reward of long service, and high professional character. And physicians, after an expensive education, and fees to the college, had the mortification to see themselves excluded from the lucrative offices which had been enjoyed by their predecessors, and, in the just expectation of which, they had risked their lives, in climates, where the yellow fever and the plague regularly cut off a majority of the medical practitioners, who had the misfortune to be sent out. The tame acquiescence of the physician-general in these abuses is the more astonishing, because he was fully aware of them; for being questioned respecting the consequences of Mr. Knight having the nomination of inspectorial officers, he replied (on oath), that it had been attended with disadvantages; for 'the consequence has been,' as he observed, 'that persons of inferior medical education have been appointed to situations superseding the authority of the physicians; I allude to the authority of the deputy inspectors.' 5th Rep. p. 99.

Thus, from an ill-judged division of patronage in the Medical Board; from a lamentable want of energy in the chief of it; in times of unprecedented calamity, when sickness has

thinned the ranks of our army more effectually than the accumulated efforts of the enemy, physicians of merit are deterred from entering into a service, in which their prospect of reward is so feeble. The physician-general, who has witnessed and felt these consequences of uneducated men being elevated to a rank which they are incompetent to fill, is himself so staunch an advocate for routine and etiquette, that he has refused to deviate, even when the necessity of the case would have fully authorized him. The same Sir Lucas Pepys, under whose auspices *Dr. Jackson* was chief physician at Chatham, and in the Isle of Wight, with Dr. Borland for a coadjutor, refused to ratify the appointment of Dr. Wright, when nominated by the government of his country to be physician to the armament under Sir Ralph Abercrombie, because the doctor had not a licence to practise medicine from the College of Physicians of London! Now, Dr. Wright was a Fellow of the College of Physicians of Edinburgh, and had served 17 years, chiefly in the West Indies; he had practised medicine in Jamaica, while unconnected with the army, for 13 years, during great part of which time he was physician-general to the militia of that island. By his writings, he was known to many of the learned in various parts of the world; and he was a member of the Royal Societies of London and Edinburgh.

'In short,' as Dr. Wells remarks, 'if private worth, patient industry, diversified knowledge, great general skill in medicine, and long experience of those diseases in particular which attack Europeans in the West Indies, were qualities to be desired in a physician to his Majesty's forces there, the fitness of Dr. Wright to be one was most eminent.' 'In September (1795), Dr. Wright came to London, expecting to receive the promised appointment immediately upon his arrival; but he was told at the Army Medical Board, that, by a rule of Sir Lucas Pepys, it could not be given to him, unless he had a licence to practise medicine from the College of Physicians of London. He declared his readiness to submit to the forms necessary for obtaining one; but those could not be completed before the end of December, and the armament it was intended he should accompany, was almost upon the point of sailing. Sir Lucas Pepys was, therefore, strongly

urged by several persons to suspend his rule; among others, by two of his own friends, who told him that Dr. Wright would certainly be appointed, whether he recommended him or not. His answer was, *he would never recommend Dr. Wright, and was sure the King would not sign his commission.* But it was quickly seen that he had grossly overrated his consequence. It was, indeed, not to be supposed, that the rule of a court physician, whose connexion with the army had commenced only a year or two before, by his being placed at once at the head of its medical department, would long prevent the execution of a measure, deemed by the ablest judges highly beneficial to the military service of our country. In October, by the influence chiefly of Sir Ralph Abercrombie, Dr. Wright was appointed a physician to the armament, and shortly after went with it to the West Indies.'*

We cannot conclude this article, without again insisting upon the evil consequences, which must always attend the elevation of obscure, uneducated men, without talent, to offices of trust. They are naturally jealous of all merit; they are incapable of liberal and comprehensive views; and they too often sacrifice the public interest to their own private advantage. Thus, Mr. Knight, by his system of inspectorships, has engrossed the chief patronage of the Board; and his pay is double that of the physician-general. The discordant and jarring principles of the Board are curiously balanced. Sir Lucas Pepys, as a college man, appoints only college men; Mr. Knight supersedes them by his inspectors, who receive even higher pay than Sir Lucas himself enjoys. To check the undue influence and mischievous effects of these inspectors, Mr. Keate, on the other hand, has contrived the ingenious device of a 'principal medical officer,' who is placed at the head of any hospital or medical staff to which he may be appointed. But this high gentleman is taken indiscriminately from 'physicians, surgeons, apothecaries, or even hospital mates, if found to answer the purpose, as was the case formerly at the York Hospital.' (See 5th Rep.) Accordingly, we have witnessed the gross impropriety of an apothe-

* Letter to Lord Kenyon, page 108-9.

cary and man-midwife (himself the deputy of another apothecary,) being appointed principal medical officer of a hospital, with an experienced Fellow of the College under his command! From the 5th Report we learn also, that at Bury St. Edmunds in 1803, and at Plymouth in 1806, *purveyors* were *principal medical officers*, commanding physicians and staff surgeons; and from the same authority we find, what indeed is not quite so enormous an abuse, staff-surgeons at Gosport, at Deal, and at Dunmow, commanding and directing physicians! We need not now be surprised at Mr. Knight's stating to the secretary at war, that 'the supply of *medical recruits* to the army is very unequal to the demand, and must necessarily daily diminish.'

ART. VIII. *Facts establishing the Efficacy of Opiate Friction in Spasmodic and Febrile Diseases. Also Outlines of an Attempt to investigate the Nature, Causes, and Method of Cure of Hydrophobia and Tetanus; republished from the London Medical and Physical, and the Edinburgh Medical and Surgical Journals. To which are added, Cases and Remarks not before published.* By Michael Ward, late Surgeon to the Manchester Infirmary, Dispensary, &c. 8vo. pp. 208. Printed at Manchester. Bickerstaff, London.

WE have been so long acquainted with the fact, that the operation of active medicines may be obtained through the medium of the cutaneous absorbents, with a certainty almost equal to that of their operation on the stomach; and with regard to one of them, mercury, we have been so constantly in the practice of resorting to it, that nothing but the inveterate influence of habit can be alleged, in explanation of the tardiness with which we have applied our knowledge of the fact to other powerful remedies. Foreigners, and especially the physicians of Italy, have anticipated us considerably in their observations upon this subject; but some of them, from hypothetical views, seem to have been misled into an opinion that certain animal fluids were requisite, as solvents, to effect

the absorption of the substances employed. Thus, Dr. Chiarenti applied opium externally, dissolved in gastric juice, and afterwards squill and digitalis in the same manner; but, from the difficulty of procuring this fluid in sufficient quantity, he was induced to substitute saliva, which afforded similar success. Several other Italian physicians adopted this method. Professor Brera, of Pavia, in a work published in 1797,* relates many cases, in which the medicines above mentioned, as well as tartar emetic, aconite, corrosive sublimate, &c., were successfully administered by external friction, suspended in saliva; whence, he concludes, 'that every animalized fluid is fitted by nature to render remedies capable of being absorbed.' In the same year, however, Dr. Chiarugi, of Florence, published a letter, 'Sull' Uso Esterno del' Oppio,'† in order to prove that all the effects of this medicine might be produced upon the animal economy, by external friction, without the aid of those animal fluids; and that, by this mode of exhibiting opium, the paroxysms of mania had been speedily removed, in several cases, and in some a complete cure had been effected.

It was from this statement of Dr. Chiarugi, that Mr. Ward was first induced to employ an opiate inunction in the delirium of typhoid fever; and the success, which he experienced, led to the application of the same remedy in other diseases, and to the suggestions, which he now offers to the profession, in regard to its use in some other diseases of difficult management, or which defy, as yet, all the efforts of our art.

We cannot refuse our tribute of approbation to this attempt of the author, to extend our information on a subject too much neglected; as well as to the candid manner in which he has apparently related his facts, by acknowledging occasionally his want of success, and admitting to their full share of efficacy, the other remedies employed in combination. The necessity of the republication of the facts, scat-

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* See a brief account of this work in Duncan's Annals of Medicine for 1798.

† Ibid.

tered through several journals, is evinced by the oversight or inattention with which they have been received: together, they constitute a body of evidence which, we trust, will be instrumental in recommending the practice to farther experiment. It is true, indeed, that in a great majority of cases, in which opiates are indicated, the more speedy and certain operation of the medicine, and the more accurate knowledge which we possess of the dose, when given by the stomach, must render the troublesome mode of external friction unnecessary and ineligible: but there are not a few circumstances, under which it may become the preferable, if not the only possible mode of conveying opium into the system. As we avoid the most objectionable and hurtful effects of mercury, viz. its influence on the alimentary canal, by administering it through the medium of the cutaneous absorbents; so it would appear, from the observations of our author, seconded by those of the late Dr. Percival, that those effects of opium, which constitute the principal objections to its use, in particular constitutions and in certain states of disease, are generally avoided by its external employment. Mr. Ward observes,

'From the facts above recited, I think I am warranted in drawing the following inferences: 1st, That opium, when diligently applied externally, so as to be absorbed by the lymphatics, has powerful effects in allaying irritation, removing spasm, and procuring sleep. 2dly, That it is capable of producing these happy effects, where the exhibition of it internally had not the same salutary operation. 3dly, That this mode of introducing it into the system may be resorted to with advantage, when it cannot be given internally, or when it will not stay on the stomach.' p. 16.

Dr. Percival, who tried the opiate friction in consequence of the suggestion of Mr. Ward, informed him, that, since a former communication, he had employed it 'in a chronic dysury, and in a case of stone in the bladder, with very considerable ease to the patients, and without producing the vertigo, head-ache, and obstinate costiveness, which the internal use of laudanum had before occasioned.' p. 26. In some other cases, the same absence of the usual effects, especially the con-

stipation arising from the internal exhibition of opium, is noticed; and, in others, excessive vomiting and irritability speedily yielded to the friction. Two cases of typhoid fever with delirium, five or six cases of mania, one of delirium connected with a fractured limb, two cases of gangrene, and cases of vomiting, hiccup, hooping-cough, cholera, &c., are described as successfully treated by the external application of opium.

There are some cases, as we have just remarked, in which the internal use of opium is absolutely impracticable: such are those cases of trismus, whether of a tetanic or hysterical nature, in which the jaw is so firmly locked, the teeth at the same time being close and regular, that nothing can be made to pass to the œsophagus. In an instance of this kind, which occurred several years ago, in an hysterical female, we employed friction on the epigastrium, with a liniment of opium, camphor, and oil, with decided relief, but not with the complete effect described by Mr. Ward. The friction, however, was not well managed by the attendants. Several cases of tetanic affection, and of hysteria, are here detailed, in which the opiate friction, especially when aided (in the tetanic diseases) by cold affusion, produced a favourable termination.

From a consideration of the success of opium, externally exhibited, in tetanus, which bears some analogy to hydrophobia, and of the peculiarly irritable condition of the pharynx and œsophagus in the latter disease, Mr. Ward was induced to suggest the propriety of refraining from the use of all internal medicines, in this hitherto uncured disorder, and of trusting to the free external administration of opium. Thus far we accompany the author with much satisfaction; but when he enters into the field of speculation, he mounts a courser, which is too fleet for our ambling intellects, and leaves us beating about for analogies which may afford us some object of pursuit: we know not whether Darwin himself, on his philosophical Pegasus, could keep pace with him. After stating, that 'hydrophobia and tetanus belong to the same nosological class and order,' (thus referring to artificial and arbitrary associations, instead of describing the points of resemblance in the two diseases,) and informing us that

'the remote causes are various, according as the diseases are idiopathic or symptomatic,' though we know of no other remote cause of the *rabies canina*, (which is understood, we presume, by the terms 'idiopathic hydrophobia,') save the bite of a rabid animal,—our author thus proceeds:

'The predisposing cause of both these diseases consists in an unequal and irregular distribution of the nervous or sensorial power; the tendency to which is increased by external heat, debility in the muscular and other coats of the stomach and intestines, and of the involuntary muscles generally, impure air, &c.

'The proximate cause consists in *an exuberance and retrograde action of the faculties of the sensorium affecting the voluntary muscles.*

'The proximate effect is the disease itself, which consists in *a spasmodic and retrograde motion of the fibres of the voluntary muscles.*

'*In violent tetanus every voluntary muscle is thus affected.*

'*In hydrophobia, the spasmodic and retrograde motions are principally confined to the pharynx, the œsophagus,*' (are these voluntary muscles?) '*the epiglottis, the tongue, the muscles employed in deglutition,*' &c. p. 109, et seq.

Lest the peculiar points of excellence in his hypothesis should be overlooked, he makes this abundant display of Italics. Admitting these definitions, we must, of course, maintain that tetanus, chorea, hysteria, hydrophobia, puerperal convulsions, and other spasmodic diseases, differ from each other only in the difference of the muscles affected, notwithstanding the difference in the exciting causes, in the constitution, age, and other circumstances of the individuals usually attacked, and in the various effects of remedies, as well as in the variety of the duration and modes of termination of the diseases respectively. We do not presume to understand the 'retrograde motions' of a voluntary muscle; since we know of no other motion of which it is capable, except that of contraction, the cessation of which is relaxation. Even in an involuntary hollow muscle, what has been called a retrograde action, is only a repetition of the usual contraction of its separate fibres, succeeding in a series the opposite to that of the ordinary succession. However, the author boldly proceeds to his practical inferences.

'Thus it appears, that three different states of the nervous power subsist *at the same time; namely, an exuberance, a deficiency, and a retrograde action. The voluntary muscles are the seat of the first and third, and the involuntary of the second,*' &c. p. 116: and, of course, 'the indications of cure, according to this view of the subject, will be clear and simple; viz, 1st, *to restore the balance in the distribution of the nervous or sensorial power;* and, 2dly, *the natural, that is, the* PROGRESSIVE *action of the muscular fibres.*' p. 118.

Simple enough, in good truth! How long will medical writers persist in mistaking a change of terms for a new view of facts? What is here indicated by the words, 'to restore the balance,' &c. but, 'to restore the healthy function of the muscles?' in other words, 'to cure the disease!' Our author, however, does arrive at a more specific indication; namely, that, in order to produce the wished-for restoration, 'the superfluous or exuberant portion of the nervous power must be repelled *from the voluntary to the involuntary muscles, i. e.* from the circumference to the centre:' hence, it is very clear, that '*no medicine, or combination of medicines, administered internally, can be adequate to the production of these effects.*' Q. E. D. See p. 118.

Now, we profess ourselves to be among those, who conceive the most successful operations of our art to be incapable of satisfactory explanation, such as the treatment of syphilis by mercury, and of intermittent diseases by bark and arsenic; and, therefore, we should have valued a single fact, or even a brief analogical statement, above all this tissue of fanciful and speculative verbiage, from which we are not a whit the more disposed to expect success from the expedient here recommended. Considering hydrophobia as a disease hitherto eluding all the means of relief that have been pursued, and as consisting principally of the most acute and torturing augmentation of sensibility and irritability, which the human body can exhibit, we should be led to try the effects of the most powerful narcotic in its fullest extent. From this view of the subject, it was suggested, by a very intelligent medical friend, some time ago, that a *bath* of laudanum

might possibly afford relief in hydrophobia; and, from the operation of opium, externally applied, as described by Mr. Ward, we should be more than ever disposed to anticipate advantage from such an expedient. But our expectations must be considerably impaired, on the other hand, by the recollection of the large quantities of opium, administered internally, by Dr. Babington and Dr. Wavell, in two cases of hydrophobia, without producing the smallest benefit.* In one of these, Dr. Babington administered no less than *one hundred and eighty* grains of solid opium in the short space of twelve hours; in the other, *fifty* grains were exhibited within 24 hours, besides *ten* in an enema, and *five* more by the mouth within an hour afterwards, without producing any apparent effect. These facts ought to remove Mr. Ward's supposition, founded on no appearance of evidence or probability, that opium may be an antidote to the canine poison: and the unsuccessful case, in which opium was externally employed by Dr. Bardsley,† is rather adverse to his sanguine hopes of the efficacy of his remedy.

Our readers must have had a sufficient portion of Mr. Ward's hypothetical lucubrations; and therefore we shall omit any account of his speculation, relative to the '*spasmodic* disease,' diabetes, and its analogy to hydrophobia and tetanus; which analogy we conceive to be purely adventitious; namely, that the disease stands, whimsically enough, in the same order with them, in Dr. Cullen's *Nosology*. We shall confine our few remaining observations to the modes of employing the opiate friction, which our author recommends.

An ointment composed of one part of opium, finely powdered, with four or five parts of axunge, and one or two of olive oil, is esteemed an adequate application in most instances: it does not appear, however, that any great nicety is requisite in the proportions, provided the opium be in sufficiently fine powder, before it is mixed with the other ingre-

* See Medical Records and Researches, Art. VIII. p. 117.

† Med. and Phys. Journal, Vol. XIII. p. 155.

dients. Mr. W. adds, that 'the smaller the quantity of unguent, the better, provided the whole be made so smooth and soft, as not to occasion any uneasiness by its tenacity in applying the necessary degree of friction.' The quantity of opium which he usually applied at each time, was from 6 to 9 or 10 grains, with about 3 drachms of hogslard. Dr. Percival employed the following formula:

℞ Opii purif. grana decem
Unguenti Adipis Suillæ unciam dimidiam
Camphoræ grana quinque. M.

This quantity was rubbed in at each time. Dr. P. likewise used the tincture of opium (three drachms), formed into a liniment with an equal quantity of olive oil, by means of the yolk of an egg. 'But the tincture alone,' Mr. W. remarks, 'rubbed into the skin of the arms, has produced more speedy and powerful effects than any other preparation I have tried.' p. 28. He directs 'from three to six drachms, according to the age of the patient, and the severity of the attack,' (he is here speaking of hysteria,) 'of the tinctura opii to be rubbed upon the insides of the arms, between the wrist and shoulder, until the whole is absorbed; which has commonly been succeeded in the course of a quarter or half an hour, sometimes sooner, by a remission of the spasms, and composure of body and mind.'

Several of the papers, which are reprinted from the journals mentioned in the title page, are communications from other practitioners, who had been induced to try the mode of practice, which Mr. Ward had recommended. We think, however, that, with very little additional industry, Mr. W. might have arranged the whole in a more lucid order, and have condensed his own papers, so as to have placed the facts in a more satisfactory light, and to have avoided a considerable degree of repetition.

ART. IX. *Medico-chirurgical Transactions, published by the Medical and Chirurgical Society of London.* 8vo. pp. 289. Vol. I. Longman and Co.

THE Medical and Chirurgical Society is founded on a liberal plan, and, although of recent date, enrols among its associates several of the most distinguished professional characters in the metropolis. When, therefore, a volume of their transactions was announced for publication, much interest was excited. The cramp tautological title somewhat struck us, in the outset, as ill-chosen; it seemed to threaten our teeth, like one of our school-boy puzzles, 'Chichester church stands in Chichester church-yard.' Still we had hopes of the preface, which, in a publication of this nature, is usually undertaken by some one versed, at least, in the art of writing. A friendly critic in the London Medical Review had also raised our expectation, by stating, that the preface 'is as it ought to be, neat, and unostentatious.' The perusal of it, however, convinced us, that, so far from being 'neat, and unostentatious,' it is a laboured, and dull attempt, to eulogize the society, and is more remarkable for incorrectness of composition, than for elegance of style. The origin of the institution is thus awkwardly announced:

'The want of a society, founded upon liberal and independent principles, and conducted with the propriety and dignity which are worthy of the medical profession, had been long acknowledged: *and a few* physicians and surgeons, in the year 1805, held a meeting, for the purpose of considering the best means of obviating *it*.' Pref. p. i.

We shall proceed to notice some of the principal contents of the volume. Two cases of aneurism of the carotid artery, which occurred in the practice of Mr. A. P. Cooper, claim particular attention. The disease has seldom been known to affect the carotid artery; and Mr. Cooper has the merit of being the first operator, who has ventured to tie it under such circumstances. In the first case, the patient was a female, aged 44. The tumour had existed upwards of five months, and, at the time of the operation, Nov. 1st, 1805,

reached from near the chin, beyond the angle of the jaw, and extended downward to within 2½ inches of the clavicle.' For three weeks previous to this, the pulsation in the tumour and in the brain, had been so strong as to prevent her sleeping; the scalp on that side was very tender, she had great difficulty in taking any solid food, and was constantly teased with a violent cough. Mr. Cooper thus describes his mode of operating:

'I made an incision 2 inches long, on the inner edge of the sterno-mastoid muscle, from the lower part of the tumour to the clavicle, which laid bare the omo- and sterno- hyoideus muscles, which being drawn aside, toward the trachea, exposed the jugular vein. The motion of this vein produced the only difficulty in the operation, as, under the different states of breathing, it sometimes presented itself to the knife, tense and distended, and then as suddenly collapsed. Passing my finger into the wound, to secure that vein, I made an incision upon the carotid artery, and having laid it bare, I separated it from the par vagum, and introduced a curved aneurismal needle under it, taking care to exclude the recurrent nerve, on the one hand, and the par vagum, on the other; the two threads were then tied about half an inch asunder, being the greatest distance to which they could be separated.'

As soon as the threads were tied, all pulsation in the tumour ceased, the wound was superficially dressed, and the patient rose from the chair; she was immediately seized with a violent fit of coughing, which threatened her existence.—She slept six hours during the night after the operation, but was now and then disturbed by her cough.—In the evening of the 8th day, her left arm and leg were paralytic. On the 12th day, the ligatures were drawn from the wound, and the edges of it were brought together by adhesive plaster. On the 14th, she was considered out of danger. On the 17th, however, she laboured under a high degree of constitutional irritation; the tumour had increased in size, and was very sore on pressure. The wound was as large as immediately after the operation, and discharged a sanious serum. From this period, she grew worse till the 21st, when she died.——On dissection,

'The aneurismal sac was found inflamed, and around the clot of blood, which it contained, there was a considerable quantity of pus.—

The inflammation extended on the outside of the sac, along the par vagum, nearly to the basis of the scull.—The glottis was almost closed, and the internal surface of the trachea was inflamed, coagulating lymph adhering to its mucous membrane. The sudden increase which the parts had undergone from inflammation, added to the size of the tumour previous to the operation, had occasioned so much pressure upon the pharynx, that it would not easily admit a bougie of the size of a goose quill.'—' The cause of her death, then, was the inflammation of the aneurismal sac, and the parts adjacent, by which the size of the tumour became increased, so as to press on the pharynx, and prevent deglutition; and upon the larynx, so as to excite violent fits of coughing, and ultimately to impede respiration.'

As permission to open the head could not be procured, the cause of the paralysis was not ascertained. The second case was attended with more favourable circumstances, and the operation completely succeeded. The patient was a porter, and actually reverted to his occupation of carrying loads, in three months from the time of the operation being performed. We have heard of another instance of the artery being successfully tied, in carotid aneurism, and therefore infer, that where the disease has not existed long enough to cause great constitutional irritation, or where there is nothing particularly adverse to the operation, it may be safely practised, and thus afford a means of recovery, in cases which formerly were consigned to the fatal course of nature.

Among the most valuable papers, is one from Mr. Abernethy, who has had an opportunity of dissecting two cases, which presented some peculiar morbid changes of structure of the heart.

' A young man, about 19 years of age, was admitted into St. Bartholomew's Hospital, with a disease, which had continued to increase for three years. His body and limbs were bulky. The cellular substance beneath the skin seemed tumid, and, in some places, anasarcous; his legs were anasarcous even in a considerable degree. His belly was large, and seemed to contain some water, though not sufficient to occasion a perceptible undulation. His face, like the rest of his body, appeared bloated. The skin had every where a livid appearance. The veins were slightly turgid. The breathing was frequent and laborious. He had a short cough, but with little expectoration. The pulse was

uncommonly small and frequent.'—'The symptoms increased in severity for the course of a month, when the patient died.'——Dissection. 'The cellular substance was every where tumid with fluid, and serum was found in all the large cavities of the body. The lungs were dense, their vessels being turgid with blood, and their cells contained much serous fluid. The right cavities of the heart were healthy in appearance, and distended with blood. The left auricle was also filled with blood, and appeared of twice its natural magnitude. The left ventricle was small, and empty.'

The passage from the left auricle into the left ventricle was almost closed, apparently by the elevation of the mitral valves. The aperture was of an elliptical form, and situated between the sides of the two pointed productions of the mitral valve. The second case differed in some particulars, but was evidently of the same nature as the first. In a recent publication of Mr. Burns, on the diseases of the heart, two cases resembling the above are related. We have no doubt, that the disease is much more frequent than is usually supposed, having occasionally observed patients die under similar circumstances, where the bodies have not been permitted to be inspected after death. Mr. Abernethy has suggested some hypothetical opinions 'relative to the *cause* and manner *in* which the contraction takes place;' but, from the obscurity of the style in which they are couched, we suspect that they are not very intelligible, even to the learned gentleman himself.

Mr. Dundas, serjeant-surgeon to his Majesty, has described a disease of the heart, of which he thinks no account is to be found in any medical author; yet the complaint is not very uncommon, for, in the course of 36 years, nine cases have occurred to his immediate observation. We regret that Mr. Dundas has not been more particular in detailing the symptoms of this disease; his account of them is very general, is carelessly written, and evidently denotes that he did not take a minute report of each individual case, or, that he deems accuracy and precision of little importance. The disease is a partial enlargement of the heart, with adhesion of the pericardium, and is noticed in the recent publication of

Mr. Burns, under the title of 'Chronic Inflammation of the Heart.' This author also refers to the works of Morgagni, Ruysch, Lieutaud, Ferriar, and Portal; by which it appears evident, that these writers had met with diseases so corresponding in the symptoms, termination, and appearances on dissection, with the cases recorded by Mr. Dundas, that we cannot doubt their being of the same nature. A very opposite affection of this organ has been observed by Mr. Chevalier; he terms it, asphyxia idiopathica; and, in a neatly written paper, has detailed three cases, in which he had an opportunity of ascertaining the morbid appearances by dissection. The patients died suddenly, without any previous indisposition. On dissection, the heart in each was found extremely flaccid, and did not contain the smallest quantity of blood; all the other viscera were sound. Mr. C. conceives that the essential circumstances of the disease 'evidently denote a sudden loss of power in the vessels, and chiefly in the minute ones, to propel the blood they have received from the heart. In consequence of which, this organ, after having contracted so as to empty itself, and then dilated again, continues relaxed for want of the return of its accustomed stimulus, and dies in that dilated state.'

In a dissertation, with which Dr. Bostock has enriched the present volume, he maintains an opinion respecting the gelatine of the blood, different from those of his contemporaries, and of all preceding writers. After a perspicuous exposition of the supposed constituent parts of the blood, from the latest and most accurate analysis, Dr. B. details the several notions which have been entertained on the subject, and states, with candour and distinctness, the sources of error which have prevailed from Galen downwards. From some recent experiments, Dr. Bostock has ascertained the existence of three animal fluids, which, in consequence of their being found in almost all parts of the body, he denominates primary: These are, albumen, jelly, and mucus. Having nicely determined their distinguishing characters, our author was led to investigate more intimately the nature of the uncoagulable part of the serum. From various

experiments, carefully conducted, and often repeated, he draws the following conclusions:

'First, that when diluted serum is completely deprived of albumen, which is proved by its no longer yielding a precipitate, upon being boiled with the oxymuriate of mercury, it is not affected by the infusion of tan. Secondly, that the animal matter contained in serum, which is not coagulated by the operation of heat or the oxymuriate of mercury, does not possess the property of concreting by cold. Whence we may infer, in the third place, that that part of the serum which is not coagulable by heat, does not possess the properties which are essential to jelly, either physical or chymical.'

Having thus demonstrated that the uncoagulable part of the serum is not jelly, Dr. Bostock was induced to consider it as consisting of mucus. He thinks himself authorized to hold this opinion,

'Both from the nature of the precipitate produced by the acetate of lead, which exhibited the peculiar flaky form, which is indicative of an animal or vegetable impregnation, and likewise from observing the appearance that it assumed by evaporation.'

The paper concludes with a brief but satisfactory explanation of the circumstances, which probably concurred in misleading Fourcroy, and those who have followed him, in the belief of the existence of gelatine, as a constituent of the blood.

Among the remarkable cases recorded in the volume before us, may be ranked the history of a recovery from the effects of laudanum, as related by Dr. Marcet. A young gentleman swallowed six ounces of laudanum, the whole of which remained in his stomach, and brought on symptoms of immediate dissolution. Five hours and a half had elapsed, when he took a solution of one drachm and a half of white vitriol, which produced nausea, and he vomited about one ounce and a half of a fluid, which had a strong smell of opium. Dr. Marcet saw him six hours after the opiate had been taken, and thus describes his situation:

'I found him on the floor, resting on his knees, with his body leaning forwards, and supported by two friends, who, as I afterwards

learnt, were in the act of laying him down, in order to let him die in peace. His head was hanging lifeless on his breast, with his eyes shut, and his countenance ghastly. His respiration was slow and sonorous, like the apoplectic breathing. His hands were cold, and the pulse beat from ninety to ninety-six strokes in a minute, in a feeble and irregular manner. All the muscles of his body were in a state of extreme relaxation, and the flesh of his arms in particular felt singularly soft and inelastic.'

He was immediately made to swallow a solution of fifteen grains of blue vitriol, which was effected ' with a kind of agonizing effort.'—' He had scarcely taken the dose one minute when he suddenly threw up a large quantity of a brownish fluid, which had a strong smell of laudanum, and was immediately followed by two or three more gushes of the same liquid; the whole amounting to between one and two pints.' These, together with keeping him incessantly on his legs, and in constant motion, were the chief means of recovery, which at length was completely effected. Although we are thus encouraged to persevere in our attempts to preserve life under circumstances apparently the most threatening and hopeless, we cannot expect to meet with frequent instances of success. In the present case, we even suspect, from the stomach's little susceptibility to the stimulus of the laudanum, that the patient had been accustomed to take opium in some form or other, at least Dr. Marcet has not informed us to the contrary.

This intelligent physician has also very minutely stated the particulars of a case of hydrophobia, with the appearances after death. Nothing occurred, however, materially differing from the numerous instances of this disease already recorded. In the treatment, the inefficacy of opium and vitriolated iron, of the arsenical solution, and of the extract of hyoscyamus, was fully established. The hyoscyamus, indeed, was decidedly injurious; for the second dose of it threw the patient into a paroxysm of rage; and he exclaimed, ' that the medicine burnt him to death.'

An interesting narrative of the effects of the vapour of burning charcoal on two persons, is communicated by Dr.

Babington. One of the sufferers died before any means of assistance could be obtained, the other was with extreme difficulty recovered. The symptoms were such as usually occur under similar circumstances, and are perspicuously stated. In the treatment, bleeding proved injurious; whilst the application of galvanism, cold affusion, and the inspiration of oxygen gas, were beneficial.

A paper by Mr. James Moore treats of those concretions, which are occasionally present in gouty habits, and are usually termed chalk-stones, although they are not calcareous, being chiefly composed of lithic acid. In persons affected with these depositions, a white liquid is effused by the exhaling arteries into internal cavities; the aqueous part is absorbed, and a substance remains which gradually becomes hard and friable. Our limits do not allow us to detail more of this interesting subject, which has been unaccountably neglected by practical writers.

Two singular cases, in which manual dexterity proved eminently serviceable, are stated by Mr. Thomas. In the first, an ivory ear-picker, three inches in length, escaped through the meatus urinarius into the bladder of a lady. Mr. T. succeeded in dilating the urethra by means of the sponge-tent, till he was enabled to pass his fore-finger into the bladder. After extracting the instrument, he retained his finger in the bladder five minutes, ‘ solely with a view of attending to the contractile force of that viscus.’ Contrary to his expectations, he found ‘ every where nothing else than a soft pulpy yielding substance, totally insensible to any stimulus he could produce by the finger nail.’ In the second case, he introduced ‘ one finger after the other, until the whole hand was engaged in the rectum’ of a gentleman, by which means he was enabled to withdraw a stick, nine inches and a half in length, which was jammed in the hollow of the sacrum.——The practice of dilating the female urethra, Mr. Thomas observes, is by no means new; he even thinks, that, in a young and healthy female subject, where the bladder is free from disease, a very large stone may be extracted, without the use of any other instrument than the

forceps. These remarks deserve attention. To simplify operations, and mitigate the sufferings of the patients, should always be primary considerations. We remember reading of the high operation for the stone being performed, to extract a bodkin from the bladder of a young female, when most probably dilating the urethra, as described by Mr. Thomas, would have succeeded.

Since hydrophobia has of late so frequently occurred, the diseases of the canine species have become very important; we therefore regret that the space, which we have already allotted to the consideration of this volume, does not permit us to give the particulars of an admirable dissertation, on the distemper of dogs, by Dr. Jenner; who has also related two cases of small-pox infection communicated to the fœtus in utero.

We cannot conclude without observing, that some very trifling productions, scarcely worthy of a place in the Physical Journal, have been inserted in this volume. Amongst these may be ranked Dr. R. Pearson's observations on hooping-cough, in which he recommends ' a medicine compounded of opium, ipecacuanha, and prepared natron;' first, however, removing the accumulation of phlegm by an antimonial vomit. When the paroxysms of the cough have become less frequent and violent, ' the ipecacuanha wine is omitted, and a sufficient dose of gum myrrh is substituted in its place; the quantity of opiate tincture is diminished, while the proportion of alkaline salt remains the same.' This medicine has been long familiar to most apothecaries, and in slight cases is as good as any other remedy; but it is quite distressing to observe the indifference with which Dr. P. talks of bringing away the accumulated phlegm, and quieting the paroxysms by a mode of practice, which, in severe cases, we contend would prove wholly inefficient.

A communication of Dr. Stanger's is even still more trivial. He very gravely enumerates the symptoms of a dyspeptic spinster, affected with a cough and debility, whom he cured with a preparation of iron, very similar to the well-known myrrh mixture with steel, of Griffiths.

The remaining papers in this volume, are—

'An account of a case of lithotomy, with remarks, by Thompson Forster, Esq.' &c.

'A case of intus-susceptio, with remarks, by Thomas Blizard, Esq.' &c.

'A description of two muscles surrounding the membranous part of the urethra, by James Wilson, Esq.' &c.

'A case of tumour in the brain, with remarks, by John Yelloly, M. D.

'Case of a fœtus found in the abdomen of a boy, by George W. Young, Esq.'

'Historical account of Philip Howorth, a boy in whom signs of puberty commenced at a very early age, by Anthony White, M. B. &c.

If the council of the Medical and Chirurgical Society intend to publish more of their transactions, we beseech them to wait till they have collected more valuable materials, than those of which their first volume is composed. And if they have any regard to their literary fame, we suggest the propriety of their revising the papers, submitted to their notice, with greater care. Several inaccuracies have escaped correction, and the general feature of the work bears the stamp of coarse and careless composition, whilst the value of the facts recorded does not prevent these blemishes from being observed.

The plates also render the volume more expensive than its intrinsic merit deserves. The marvellous history of a fœtus contained in the abdomen of a boy is illustrated by no less than four separate engravings.

ART. X. *Oratio in Theatro Collegio Regalis Medicorum Londinensium ex Harveii Instituto, habita Die Octobris* XVIII, *A. D.* M.DCCC.VIII. A Ricardo Powell, M. D. Socio. 4to. pp. 28. Veneunt apud Longman and Co.

IN a discourse of which the chief object is to commemorate the benefactors of a corporate society, it would be perhaps unreasonable to expect much novelty of matter, or to look

for that depth of research which might otherwise be supposed to characterize a composition stamped with the name of Harveian, and published under the sanction of those learned men whom the discoverer of the circulation of the blood hoped, by this sort of posthumous exhortation, to encourage in the study of nature, and incite to imitate his own great example. Accordingly, the majority of those upon whom the honour of delivering this anniversary harangue has devolved, have contented themselves with vaunting the merits of all who have assisted in the aggrandizement of the college; recounting what lectureships they endowed, what legacies they bequeathed; and expatiating on their presents of books and of plate, and on the joys of the feasts which they instituted. In some few instances, indeed, the orators have ventured to deviate from this hackneyed path, and to enlarge on topics which were not directly prescribed to them in the deed of trust. It was from the observations which Dr. Mead introduced in his Harveian Discourse, that the learned controversy respecting the state of medicine in ancient Rome took its rise; and we are indebted to the oration of Sir George Baker, for some curious researches concerning the progress of anatomy in England: but we seek in vain, even in the composition of Dr. Freind, for that satisfactory view of the advancement of the art, which he was so well qualified to furnish, and that enthusiastic zeal for its welfare, which the solemnity of the occasion was so well calculated to inspire; and in by far the greater proportion of these speeches we discover neither the charms of eloquence, nor the marks of extensive and profound erudition.

As, however, we have professed our willingness to allow for the fetters which have been injudiciously imposed upon the orator; and as we are further disposed to consider the custom of nominating to the office according to the seniority of the Fellows, as the worst of all possible methods for exciting any thing like emulation or zeal, we should have refrained from all animadversions on the discourses in question, if the authors of them had, in general, prudently confined them to the mansion in which they were delivered, and not obtruded

on the world so many of their dull and shallow performances. We may admire the comprehensive learning of a Mead, and be delighted with the elegance of a Garth, or an Arbuthnot; but we turn with disgust from such a miserable *cento* from Horace and Cicero, as the oration of Sir William Browne,* or such a boyish rhapsody as that which flowed from the pen of Dr. Latham.

Of the composition which now demands our attention, it is impossible for us to speak in terms of commendation; it being distinguished neither by purity of style, nor by neatness of arrangement, nor, in short, by any one characteristic of an eloquent harangue. For the want of polish, it is true, the author apologizes in the exordium, and his auditors were no doubt ready to admit the justness of the excuse: but, then, where was the necessity of submitting to the public at large this confessedly defective production; why hazard the reputation which he may have earned from his other works, by a performance so little creditable to him as a man of learning or of taste? The only probable motive which we can assign for this unwise publication, is the desire which Dr. Powell may have had, in common with his collegiate brethren, to promulgate a certain legal opinion concerning the jurisdiction of the Royal College, on which we shall take an opportunity of offering some comments, before the present article is brought to a conclusion.

We have not to complain, that Dr. Powell's style is diffuse, or incumbered with ornament; but that it is perplexed, in-

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* How mortifying would it have been to the vanity of this titled pedant, if at the time he published his Harveian harangue, decorated with all the insignia of academical ostentation, and all the emblems of universal learning, he could have foreseen the utter contempt with which himself and his writings are now generally regarded! The following is the pompous title of his discourse: 'Oratio Harveiana, *Principibus Medicis parentans; Medicinam, Academias utrasque laudans; Empiricos, eorum cultores perstringens; Collegium a natalibus illustrans:* In Theatro Collegii Regalis Medicorum Londinensium habito Festo Divæ Lucæ, M.DCC.LI. A Gulielmo Browne, Equite Aurato, M. D. Cantab. et Oxon. Hujusce Collegii Socio, Electore, Censore. S. R. S. et a Consiliis.'

elegant, and sometimes even not very grammatical. Thus, in page 3, when speaking of the object of the Harveian oration, he says, it was destined, by its founder, to the celebration of those who had most contributed to the advancement of medicine in this metropolis, and to furnish posterity with examples—' et inde posteris exempla suppeditaret, ad quæ respicientes et virtutem imitantes, ad idem laudis et famæ fastigium semetipsos attollerent.' Here we have a defective construction, there being no proper nominative to govern the verb *attollerent;* and the expression *virtutem imitantes* is obscure. Dr. P. probably meant the virtue of the examples. The latter verb in the following sentence should have been in the subjunctive; and the arrangement of the whole is, to say the least, extremely awkward: ' Horum plurimi adeo nostrum domicilium amaverunt, ut moribus, ingenio, eruditione, *durante vita, ornatum, morituri* etiam donis *amplificarunt.*' A sentence in page 18 would admit of considerable improvement as to euphony and elegance of construction. ' Huic malo quinetiam nimis inservit *ista opinio qua id ad* vectigal solvendum aptissimum judicatur, quodcunque in communem usum seu voluptatem comparatur, nec ad vitam sit necessarium.' In the following, again, there is an obvious redundancy: ' Officia medici late patent, illi etenim præ cæteris ingenii opus, *et* doctrina undequaque exculti et imbuti.'

The author, in the outset of his speech, enters into a digression respecting the endowment of the principal hospitals in the metropolis, which we think misplaced, and not very interesting. In his account of the conversion of the monastery of St. Bartholomew to an infirmary, we could not help being struck with a remarkable deviation, on the part of Dr. Powell, from that courtly tone in which his predecessors had been wont to speak of the royal patron of the college, Henry the Eighth. ' Sub *magnanimi Henrici* auspiciis,' exclaims Dr. Arbuthnot in his Harveian oration, ' tam relligio, quam bonæ literæ, excussa tyrannide et caligine, pleno jubare resplendere cœperunt. *Multa te, fortissime princeps, præclare pro republica, bello et pace, domi et peregre, gessisti; dum infa-*

mia desidiæ, luxus, et ignorantiæ asyla radicitus extirpares, artibus liberalibus præstabas habitacula. Quam tuas suppliciter ambiebant amicitias peregrini principes, quam tuas virgas atque secures tremebat populus! Si quædam minus humaniter fecisti, horum nos memoriam abjicimus, propter insigne hoc erga cives miseros, et ægrotantes, clementiæ indicium. *Tibi* enim literarum fautori, et Elizabethæ Genitori *nihil non condonandum est.*' Let us now contrast the character which Dr. P. gives of the same 'magnanimous' monarch in the following short sentence. 'Numen idcirco divinum adoremus, a quo provisum est, ut PRODIGI ISTIUS TYRANNI *libido et rapina*, posteris conservandis tandem conduxerint.'

With such freedom of language we are not disposed to find fault; we only wish that Dr. P. had evinced the same independence of mind throughout his discourse: but, if he has been rigidly impartial in his judgment of the dead, his demeanour towards the living savours occasionally of adulation. In page 19, for example, there is a long eulogium of the president, which even he, we think, will find it difficult to digest. On the other hand, the author deserves credit for his spirited remonstrance on the present degraded state of his *Alma Mater*, the university of Oxford, considered as a medical school.

'Nos quidem Oxonienses,' Dr. P. observes, 'nihil ad medicinam excolendam sacris illis sedibus deesse, immo larga manu quodcunque facile desiderares, suppeditari scimus; sed *nihil studii, nihil operæ, nihil facultatum, in his muneribus conferri, invitus, coactus fateor. Stipendia et insignia manent, sed in quibusdam vix et ne vix quidem habentur ex more præscriptæ prælectiones, vix identidem inter officia professoris æstimatur ibidem commoratio.* Academias nostras summa veneratione colendas, et judico, et mihi propono; longe igitur absit, ut si quid ipse eas admoneam, id pro opprobrio dictum usurpetur; sed dolore afficior quoties studiosam medicinæ juventutem, se apud exteros nobilissima hac arte instituentem, quoties, aliis in locis, magistros in docendo habiles et strenuos, auditoribus, honoribus, stipendiis, laborum præmiis insignitos, *nostros in inertia conquiescentes* aspicio, quin, se respiciant et tam utile exemplum apud suos imitatione haud prorsus indignum judicent, quin, né obtrectatoribus nostris plures et justiores tanquam ansas ad re-

prehendendum suppeditent, *medicinam ultra languescere* prohibeant, nec quo in loco nova virtute novis viribus cæteræ artes vigescunt, hæc una debilis et prostrata videatur: ipsi potius, in statione jam satis diu dormitantes, ut expergiscantur, per officia, per fidem, per temporis necessitatem, per academiæ honorem, palam omnibus obsecro obtestorque.'

After this explicit and truly candid avowal, that the science of medicine is not taught at Oxford; that the professors, though they enjoy ample salaries, are too indolent to give any lectures, and hardly deem residence in the university a part of their duty; that the student, who wishes for the necessary instruction, must resort to other seminaries, where the teachers are more active, but more dependent on the wages of their labour;—after this admission, on the part of one of Oxford's sons, on the part of one of the Fellows of the College, we were prepared to hear, that the latter body had at length seen the wisdom of repealing their disgraceful bye-laws, which declare, that the only persons qualified for seats in their society are precisely the men who have studied in those universities, where medicine cannot be learned; which exclude from that privilege every physician, whom zeal for improvement has led to obtain a diploma in a foreign school; and according to which, the great Harvey himself would have found the doors of the Royal College fast barred against him.* We concluded that the Fellows, animated by

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* From a passage in Dr. Wilmot's Harveian Discourse, it would appear that Dr. Freind had the merit of proposing that statute, which deprived all those whose destiny had not led them to graduate at an English university, of right of admission into the college. The injustice of such an enactment, and the infamy of the intrigue by which the universities of Oxford and Cambridge were about the same time prevailed upon to declare, that they would no longer *incorporate* physicians with foreign degrees, must strike every one, when it is considered, that the very men, whose merits it is the great object of the Fellows to celebrate in their anniversary harangues, the men to whom they owe all their present splendour, if not their existence as a corporate body, would have been effectually excluded from seats in their society, by those statutes which they now so unwittingly laud;—that Linacre, Caius, Harvey, Mead, and Sloane, who had all the misfortune to graduate abroad, and who availed themselves of the privilege of incorpora-

a liberal spirit, and desirous to celebrate the anniversary in a manner worthy of the founder and of the society, had deputed Dr. Powell to the honourable office of proclaiming this long delayed abrogation, and of announcing to the world, that jealousy and intrigue had quitted for ever the precincts of Warwick Lane. We anticipated with delight the prospects which such conduct opened;—the influence which it would have in quelling all dissensions between the different classes of physicians in this metropolis,—in exciting a spirit of cordial emulation among the chief members of the profession, by which the art might be improved, and its dignity effectually supported. That our hopes were not presumptuous, we were convinced, upon reflecting, that the universities of Oxford and Cambridge have never, since their foundation, enjoyed any repute as medical schools; that those who have most adorned the college by their learning and professional skill, were indebted for their acquirements to foreign seminaries; and that, at this day, no one ever dreams of resorting to Oxford or Cambridge, to obtain the first elements of medical knowledge. If, therefore, a compliance with prejudice, and a sacrifice to interest, have hitherto led those physicians, who are desirous to procure the higher honours of the profession in the metropolis, to waste the most valuable portion of their lives in performing monastic exercises, and in learning

'Words, and forms, and definitions void,'

how much might be expected from their exertions, if a free bent were given to their minds, and they were at liberty to seek for instruction in whatever quarter it was to be most advantageously found—in whatever quarter the science of medicine was most successfully cultivated! Certain it is, that ever since the introduction of those oppressive regula-

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tion, would probably have been treated with the same insulting arrogance, and the same defiance of justice, on the part of the college, as they have more recently shewn, when physicians qualified for fellowships, *even according to their own bye-laws*, have petitioned merely for examination.

tions to which we have adverted, the preponderance of talent and erudition has not been on the side of the Fellows; and the defenders of college rights will find it difficult to prove, that this defalcation has not kept pace with the increase of restrictive enactments. To say, that, because the practitioners in the capital of the British empire are at the head of their profession, it is but reasonable, that those who aspire to this distinguished rank should have studied in an English university, might appear a plausible argument, if it could be shewn, that, at such an university, the student could be properly grounded in the art; but when the persons, who hold this language, come forward and confess, almost in the same breath, that Oxford and Cambridge, however excellent they may be for other departments of learning, can qualify no one for the practice of physic, it must be deemed insulting to every man of common sense. Medicine acknowledges no aristocracy; the field of promotion, as far as merit is concerned, is alike open to all; and, though some men may pride themselves on adventitious accomplishments,—'quibus in ore multus Aristoteles, multus Cicero, multusque sit Seneca, multusque demum Virgilius;' yet the world, in considering the character of a physician, pays regard only to those qualities which fit him for a correct and dignified exercise of his art. If the honest ambition of rendering themselves extensively useful, induce practitioners of superior attainments to settle in the metropolis, are a few interested individuals to be allowed to thwart them in their pursuit of employment, because, forsooth, they have not lived three years in a cell, and are not, according to ancient usage, entitled to wear a red hood? To classical learning, or to any sort of knowledge that can polish and adorn the mind, far be it from us to object; and if the rulers of the college, considering the high importance of the medical art, and the expediency of determining by the strictest tests, the qualifications of those who venture upon its practice in this overgrown capital, had declared, that every candidate should exhibit proofs of being groundedly learned in all the branches of natural and moral science, which can be supposed to bear the least relation to

medicine, we still should not have complained. It is only against the absurd principle of making the extraneous circumstance of having graduated in an English university the standard of great medical acquirements, that we enter our protest. It is only the selfishness of the college, in sacrificing the welfare of medicine to the interests of two seminaries where medicine is not taught, that we deprecate and deplore.

In supposing that the time of reform was come, we have been mistaken; for, in the sequel of the oration before us, we find Dr. P. appearing as the doughty champion of collegiate rights; boasting of the victory obtained over an obscure practitioner, who had treated the college with disrespect; censuring the proceedings of Dr. Harrison and his associates; and even condescending to notice the attacks of 'The Medical Observer.' The members of the association he very charitably believes to be ignorant of the power which was granted by Henry VIII. to the president and elects of the college, to examine into the fitness of all who practise physic in England, except the graduates of Oxford and Cambridge, and to license them accordingly; 'nesciunt insuper,' he adds, 'nullum, nisi ex hac auctoritate, legitimum et idoneum medicum per statuta regni haberi; sed, ne hoc etiam nesciant, monitos volo, potestatem tunc nostris concessam, nunquam alias vel abrogatam vel imminutam fuisse. Dolendum quidem est decreta, *quæ tanti sunt momenta*, effectu suo unquam carere, et propter lites magno sumptu ineundas, et in provinciis longinquis persequendas, *pene* in desuetudinem abiisse.' To give due effect to this friendly admonition, the doctor has cited in the appendix, a charge, which is said to have been delivered by chief justice Sir James Mansfield, in an action tried at Guildhall in 1806; and which runs as follows:

'There was a great question some time ago agitated in the Court of Common Pleas, about producing a diploma. You will find it said by the judges, in the report of that case, that a diploma confers no sort of authority whatever on the person holding it to act as a physician. It is one of the strangest things in the world, that questions should be

raised upon a subject which has been so fully agitated already, and on which the decision is clear. This diploma, supposing the plaintiff to have one, gives no authority whatever to him to practise as a physician. The law of Harry the VIII. is as clear as law can be, which is, that no man can practise as a physician, unless he has undergone the examination, and met the approbation expressed by certificate, of certain members of the College of Physicians; and *that, if he does practise without it, he is liable to prosecution, by indictment, for certain penalties which he is thereby declared to have incurred, unless he be a graduate of Oxford, or the other university.* Now, the modern practice has been to get a diploma from a Scotch university, and which is obtained in a very easy way, without the performance of any exercise, or the undergoing of any examination at all; a mere grant of favour, without any proof of fitness in the object of it. And it is a favour which the English universities have no power to grant, if they were to attempt it; but it has been supposed, that there is some virtue in these diplomas from the Scotch universities, because the articles of union have given them power to confer such a privilege according to their discretion, but there is no such thing: a diploma is an instrument which confers no authority whatever on the person possessing it.' *Taken in short-hand by T. Jenkins, and published at Stafford.*

We cannot bring ourselves to believe, that such an unqualified opinion was ever delivered by Sir James Mansfield, but must consider it as a malicious libel on the legal knowledge of that respectable judge, invented, for what purpose we know not, by Mr. T. Jenkins. That 'the law of Harry the VIII. is as clear as law can be,' we are most ready to admit; but, although the statute confirming the original charter of the college enjoins, 'That noo person be suffered to exercyse or practyse in physyke through England, untill such time that he bee examined at London by the said president and three of the said electys,' &c. yet it is no where declared, that physicians, except those practising in London, and within seven miles, are 'liable to prosecution by indictment for certain penalties incurred,' if they have not 'undergone the examination, and met the approbation, expressed by certificate, of certain members of the College of Physicians.' This part of the statute, consequently, whatever Mr. T. Jenkins may choose to say, has been little more than a dead letter; and

Dr. Powell might have spared the lamentation, that his collegiate brethren are prevented from exercising their authority in this particular, merely by the trouble and expense of carrying on prosecutions in distant parts of the country. The review of their other proceedings will not allow us to give them credit even for this degree of forbearance.

But Mr. T. Jenkins, not content with such misrepresentation, proceeds to disparage the chief justice's understanding, by putting in his mouth a general aspersion on the character of Scotch universities, where, he says, a diploma 'is obtained in a very easy way, without the performance of any exercise, or the undergoing of any examination at all; a mere grant of favour, without any proof of fitness in the object of it.' That this censure should apply to any British university, we most sincerely regret; but if one or two of the seminaries in question, unmindful of the great duties which they owe to society, have made such a disgraceful use of their power, the chief justice is too well informed to include in the condemnation all the Scotch universities. At the two most respectable, viz. Edinburgh and Glasgow, no one is, or can be, admitted to a degree, till after he has studied a certain term of years, and undergone three several examinations before all the medical professors. And here we cannot help stopping, for a moment, to inquire, whether a diploma obtained after such a trial may not confer as good a right to practise, as the keeping of an *act* at Oxford, or the sister university. In our former volume we have stated, that the actual term of residence at these seminaries, which is required to qualify the student for a doctor's degree, does not exceed three years; but, by a practice which it is notorious that many adopt, the practice of term-trotting, even that period may be very considerably abridged. At the end of this time, however, what tests of ability are resorted to? Is the candidate expected to display his proficiency in anatomy, physiology, and chemistry; to prove his acquaintance with pathology and therapeutics; to shew himself, in fine, prepared in every point for the practice of physic? No, he has only to translate some pages of Greek, or read a Latin dissertation, and reply to a few wretched syllogisms.

We have just chanced to open the account, which is given in the Cambridge University Calendar, of the '*Proceedings in* MEDICINE;' so called, we presume, by a figure of speech, because no knowledge of medicine is required for the occasion. As the statement is short, and conveys a tolerably complete idea of the process in question, we shall subjoin it, for the benefit of our readers.

'A student of medicine in this university *is not required to attend any lectures*, but is left to acquire his knowledge from such sources as his own discretion may point out. *His exercise (the opponency being always compounded for) and form of proceeding*, IS EXACTLY SIMILAR TO A BATCHELOR OF LAWS.

'Many practitioners of this university proceed regularly in arts, and afterwards become either licentiates or doctors in medicine.' Introd. p. lvi.

And yet these are the men who have 'accomplished all things for the grace!'

If, however, the testimonials which are given to those who obtain degrees at the English universities, do carry with them the right of practising, where no positive law to the contrary interferes, we really cannot see why diplomas from the universities of Scotland should not confer a similar privilege. By the Articles of Union, it is ordered, 'that there be a communication of all rights, privileges, and advantages, which do or may belong to the subjects of either kingdom, except where it is otherwise expressly agreed in these articles;' and it is further provided, that 'all laws and statutes in either kingdom, so far as they are contrary to, or inconsistent with, the terms of these articles, or any of them, shall, from and after the union, cease and become void, and shall be so declared to be, by the respective parliaments of the said kingdoms.' Now, as the northern universities are not excepted from the above-mentioned community of rights, but are expressly mentioned in the articles as confirmed in their privileges, we humbly conceive, notwithstanding the assertion of Mr. T. Jenkins, that Scotch diplomas may have just the same virtue in them as English, and may shew the same qualification for practice. The remark, too, respecting

the inability of the English universities to grant diplomas without examination, we hold to be equally erroneous. We believe, that, at this day, they retain the power of conferring *mandamus* degrees, and that, in former times, their favours were occasionally bestowed on as unworthy objects as ever obtained diplomas from Aberdeen or St. Andrews, is proved by the confession of one of their own members, Dr. Winterton, who, in a letter addressed to the president of the college, Dr. Foxe, in the year 1635, says, that he has 'observed and grieved to see, sometimes a minister, sometimes a serving-man, sometimes an apothecary, oftentimes masters of arts, (whereof some have afterwards assumed holy orders,) admitted to a licence to practise in physic, or to be incorporated to a degree, *without giving any publique testimony of their learning and skill in the profession——incorporation being in an instant obtained by a little summe of money.*'*

To consider the question in another point of view: we shall suppose, for a moment, that the statute of Henry VIII. has all the virtue which the college would find in it; but, as it has confessedly fallen into disuse, 'propter lites magno sumptu ineundas,' we will ask, is it either candid or decorous on the part of the Fellows to charge with treason and rebellion a body of men, who, whatever the defects of their scheme of reform may be, certainly mean well, and who only desire to put a stop to that quackery and empiricism, over which Dr. Powell has stated, that the funds of the college will not permit them to exert a proper control? If the corporation were really as anxious to promote the public welfare as they profess to be, we think, that it would not have greatly derogated from their dignity, to have assisted the association by their counsel and their co-operation, instead of thwarting them, in their proceedings, by every possible means,—instead of stigmatizing their conduct as base and disingenuous.

But, adverting to the manner in which the London College have conducted themselves towards such of their brethren, as the strong arm of their power could effectually reach, can

* Goodall's 'Royal College of Physicians,' p. 444.

any one believe, that trouble or expense would deter them from an exercise of their authority, which would tend so much to the aggrandizement of the society, and so much increase its wealth? Whenever a practitioner of respectability, not qualified to appear before them, in consequence of some of their ever-changing bye-laws, has been hardy enough to establish himself in the metropolis; did their poverty ever prevent them from harassing and persecuting him, till he was obliged to quit the field, or succumb to their authority? While they display such a readiness to coerce certain *illegal* physicians, they, however, continue to allow the whole host of quacks with which the metropolis is infested, to scatter death and destruction around, without the least attempt at molestation, or the least apparent desire of interference; they allow them to unfurl their banners at the very gates of the college, and to march triumphant, and loaded with their spoils, through all the ways of that city, which the college was appointed to guard from their treacherous depredations.

To the professions of a corporate body acting in a manner so inconsistent with the great purpose of their establishment, it is impossible to allow the merit of sincerity. But their conduct becomes doubly suspicious, when we see them one day enacting bye-laws, declaring them to be indispensable to the safety of the state, and the welfare of the profession; and the next day annulling them, or dispensing with their operation, in order to suit some temporary purpose. On what statute have they ever laid more stress, than on the existing bye-law, which requires proofs of an academical education on the part of those who apply for licences to practise in London? A very few months, however, have elapsed since the college thought fit to admit an individual into the class of licentiates, in defiance of this standing order; and that, at the very time when they were engaged in prosecuting for irregular practice another individual, whose merits, for aught that we know, entitled him to a similar exemption, but who, it seems, had not the good fortune to ingratiate himself with the college. By what rule of justice can they

vindicate such a proceeding—by what new refinement of reasoning can they reconcile it with the declaration which was made in their behalf by Dr. Latham? 'NOBIS PRORSUS IGNOTUS EST INIQUUS ISTE MOS HUIC CONCEDENDI QUOD ILLI DENEGAMUS: *Lex omnibus est eadem, Tros Tyriusve nullo discrimine habetur:* In arenam omnibus descenditur, sed non omnes sors manet una; huic enim arridens, illi minus sit benigna Minerva.* *De jure, non arbitrio, trutinamur; nam libra justa et æqualis singulis suspenditur.*' Or. Harveian. p. 14.

ART. XI. *Observations on the Hepatitis of India, and on the prevalent Use of Mercury in the Diseases of this Country.* By William Saunders, M. D., F. R. S. and S. A., Fellow of the Royal College of Physicians; and Physician Extraordinary to the Prince of Wales. 8vo. pp. 82. W. Phillips.

ART. XII. *Examination of the Prejudices commonly entertained against Mercury, as beneficially applicable to most Hepatic Complaints, and to various other Forms of Disease, as well as to Syphilis.* By James Curry, M. D., F. A. S., &c. one of the Physicians to Guy's Hospital, and Lecturer on the Theory and Practice of Medicine. 8vo. pp. 37.

As candid and public discussion is generally the straight road to truth in practical matters, we are glad that a question so purely practical, and one of so much importance, as the proper administration of mercury, is likely to be brought into more general notice, under the sanction of names so respected, as those of Dr. Saunders and Dr. Curry.

It is undeniable, that the use of mercury has widely extended within the last 50 years. Having broken down the barrier, with which the prejudice that arose from associating it with the idea of a loathsome disease had limited its utility,

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* An allegorical name, we suppose, for the president of the college.

it was to be expected, that, when administered by ignorance or speculative boldness, much inconvenience, if not great injury, must ensue. But we are, nevertheless, strongly disposed to think, that the benefit derived from the careful exhibition of it by judicious men, has far outweighed the injury that may have been produced from accident or temerity: and the publicity which seems now likely to attend the discussion of its merits, by presenting us with the cautions of age and timidity, together with the results of a more bold and original practice, will enable us, we trust, in a short time, to mark with precision the limits within which this active metal may be beneficially exhibited; and to assign to it that high rank in the materia medica, which we have no doubt it ought to hold.

The opinions of Dr. S. on this subject are contained in the appendix to the 4th edition of his work on the Liver; and as this edition of the work itself presents not the least novelty, and has been so long before the public, we shall content ourselves with little more than announcing its publication, and confine our remarks to the additional matter contained in the appendix.

The respectable situation which Dr. S. holds in the medical world, and the high reputation which his book on the Liver has sustained among his professional brethren, while they stamp a value on the facts which extensive practice must have presented to him, render every error in his opinions more dangerous. Before we proceed to the examination of the matter contained in the appendix, it may be well to recollect, that, in the observations on the treatment of acute Hepatitis, in the body of the work on the Liver, Dr. S. mentions the use of mercury in the disease as it appeared in the East Indies, but is unwilling to allow that it can be employed in a similar affection in this country: and, even in our Asiatic territories, he is disposed to believe, that it is not in the early stage, or not till the more urgent inflammatory symptoms are removed by bleeding, &c., that it can be employed with safety. In the appendix, however, he is constrained, by the weight and respectability of the evidence

against him, to give full assent to the fact, that mercury is resorted to, not as a purgative, or a deobstruent, or after the disease has assumed the chronic form, but at the first attack, and in such doses as to excite salivation, and even while symptoms commonly termed inflammatory are still considerable. But to oppose the strength of this evidence against an established opinion, and in favour of the exhibition of this active medicine in a positively inflammatory affection, it is the professed object of Dr. S. in the first part of this little treatise, to establish a difference between the hepatitis of India, and that disease as it occurs in this country, and on that to found a difference of practice.—In the first place, he contends, that the hepatitis of India is actually a disease peculiar to that continent, and different in many essential particulars from the liver complaints of either Europe or America; 2dly, that the constitutions of the natives of a climate like ours have a stronger inflammatory tendency, and will by no means bear the use of a remedy so stimulating as mercury; 3dly, that the inflammatory diathesis appears with less intensity in the Indian disease, than in the affection in this country; 4thly, that the hepatitis of India is, in all similar stages, a milder disease than the sporadic hepatitis of this country; 5thly, that there is great tendency in the hepatitis of India to assume the appearance of other diseases; and, lastly, that the Indian disease is probably caused by a local poison or miasma, peculiar to that country, and for which mercury is as much an antidote as to the syphilitic poison.

To examine these objections in detail, would lead us into a discussion much more diffuse than an article of this description would admit of; and we are the less anxious about it, as we believe it to be generally obvious, that those attempts at distinction are not successful in establishing the difference between the inflammatory affection of the liver in this country and in India, to the extent which Dr. S. wishes. They succeed, indeed, in confirming (what no one, we presume, is inclined to dispute) the great influence of climate in determining the general character of diseases, and in mo-

difying the affections of the same organ, which in nosology have the same name; but they do not, unsupported by positive experience, (and no attempt is made to establish them from that source,) satisfy us of the impropriety of using mercury in any inflammatory affection of the liver, or we might say in any of the hepatic diseases of this country; for this, though not openly announced, we are forced to believe, from a perusal of the whole work, is the conclusion to which the author is disposed to lead us.* The marked connexion between the state of the liver and almost all the diseases of tropical climates, in whatever part of the globe we find them, (and perhaps the observation might be extended to more temperate regions,) is now perfectly established. The diversity which is observable in the symptoms, is to be traced to local circumstances; and we have no doubt, would our limits permit it, that, from the various circumstances which constitute and modify climate, we might give a full explanation of the peculiarities which Dr. S., with what we must consider much fancy, attributes to the influence of a particular poison. While, therefore, we are disposed not to attach any great value to those distinctive characters of the Indian hepatitis, and cannot discover that the objections to the exhibition of mercury in this country, are the result of actual observation of its injurious effects in hepatic inflammation, we are ready to acknowledge, that, in the sporadic inflammatory diseases of the liver in cold climates, and in previously healthy constitutions, the aid of mercury, except as a purgative, or, as Dr. Curry properly terms it, a cholagogue, has seldom been required; the complaint, in most instances, yielding readily, like the other active visceral inflammations, to the ordinary system of depletion. But, independent of this, and

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* We rest our conviction, as to this point, on the fact, that in no part of the work on the liver, nor in the appendix, can we find a single recommendation of mercury, except as a purgative, from personal observation. All the information that is derived from that source is conveyed in the form of cautions; and the very little that is to be collected in the way of recommendation, is given on the authority of others.—Vide p. 209, 326, 327.

what are termed chronic inflammations, or the slow changes of structure so common in this country, and many instances of deranged function, accompanied by considerable excitement, in which mercury is generally used; we are satisfied, that, when the *active* inflammation of the liver attacks a person debilitated by irregular living, fatigue, &c., or constitutions brought to resemble greatly, in their general character, that of the white inhabitants of the East Indies, the disease has its progress very similar to the hepatitis of warm climates; and, although we believe the practice has hitherto not received the trial which it deserves, yet, as far as it has been made, the result has been most favourable to the exhibition of mercury. In the second part of the appendix, or the observations on the prevalent use of mercury in the diseases of this country, Dr. S. lays it down as 'a pretty general rule for the guidance of medical practice, that any preparation of mercury, which acts upon the gums, inflames the fauces, and produces salivation, is in itself injurious, in most constitutional diseases where febrile excitement is present, whether original or symptomatic;' a rule which certainly must be received with considerable limitations. Mercury cannot be properly classed, from its effects, with any article of the materia medica: its action is peculiar, and the changes produced by it are almost in every respect different from those which follow the exhibition of remedies, with which it is arranged in our books on therapeutics. It is there called a stimulant; and, yet, what resemblance can be traced between its effects, and those of brandy, opium, and ether? Nearly as wide a difference, also, is manifest between the effects of mercury and the symptoms of idiopathic or symptomatic fever, and the reasoning deduced from the supposed resemblance is frequently contradicted in practice. Thus mercury, by removing local disease, may be frequently the most efficient febrifuge that can be administered: and it rests on experience, that in many cases of fever, as soon as the mercurial excitement, if it may be so termed, can be produced, it seems to take the place of the febrile action, and a complete cure succeeds. Besides the hepatitis

of India, (which, notwithstanding the objections of Dr. S., we are disposed to consider as perfectly in point,) what are we to think of the remittent and yellow fever of the West Indies, of dysentery, of croup, of typhus?* Are not all these attended with great febrile excitement, and yet in each mercury has been administered with much success. The point we must, therefore, consider at present as 'sub judice;' and, while we do not altogether neglect Dr. S.'s rule, we would urge strongly the necessity of not receiving it too implicitly, and, in all instances where the other symptoms indicate the use of mercury, abstain from its administration, because some appearances of febrile excitement might be present.

The cautions which follow in the appendix, are delivered to us as the result of actual observation, and we shall merely transcribe them, leaving it to the experience of others to decide on their correctness and fidelity. 'Calomel, the most manageable preparation of mercury, cannot be employed with safety or success in many cases; it is improper as a purgative even, in dyspeptic complaints, especially in delicate and irritable habits. It is hurtful in gouty and nervous affections, with very irritable bowels, except in very small doses; it aggravates every symptom of phthisis pulmonalis. When exhibited so as to act on the circulating system in strumous affections of the mesenteric glands, or of the spleen, or under the formation of tumours of every description, accompanied by fever, it is found to increase the disease. Calomel, however, with jalap or scammony, may be given in mesenteric habits with guarded caution. In scrofulous affections of the liver, with injured organization, where the absorption of parts has taken place with a structure both loose and spongy, life has been shortened by mercury; and the believers in its specific power have been disappointed in many cases of confirmed dropsy with diseased viscera. The mercurial action also shortens life in a morbid state of the kidney and urinary passages; in the scirrhous state of the

* Vide Hooper, Medical and Surgical Journal, No. xx.

prostate gland, or of the uterus. Mercury is not useful in hemorrhagy from the liver arising from pressure, infarction, or effusion. Calomel, combined with rhubarb or jalap, is useful as a purgative in strong constitutions; but, in delicate, pallid, and irritable habits, mercurial purgatives are frequently too violent in their operation.'

The Dr. concludes with a wish that it may be understood, that he does not mean to condemn the use of mercury generally in the cure of diseases, but only that it should be employed with caution and circumspection. To this statement is added, Dr. Curry's letter published in the preceding edition; a letter from Mr. Paisley, formerly head surgeon at Madras; and another from Dr. F. Duncan. Mr. Paisley's letter is chiefly intended to shew the connexion between almost all the diseases of the East Indies and a disordered liver, and the utility of mercury, properly combined, in most of these complaints. Dr. Duncan's letter inculcates caution in the use of this powerful medicine, from the prejudicial effects which he has witnessed from its exhibition even in India. But, in all his observations, it is clear, that the injury was to be attributed to the unfavourable circumstances of exposure to cold, wet, &c., and not to mercury when employed with the necessary precautions.

After the discouraging view of the effects of mercury which we have just been considering, we confess, that it is with a feeling of consolation, that we turn to the more animating prospect presented to us in the pamphlet of Dr. Curry. This little work is intended, as Dr. C. expresses himself in the advertisement, ' as a temporary caveat, at least, to stay the judgment of the public on the question relative to the effects of mercury, until the evidence for, as well as the objections against, its use shall be fairly laid before them.' It shews the decided belief of the author in the beneficial effects of mercury in hepatic complaints, his conviction of the error of the very general opinion respecting the injurious effects of that metal on the human constitution, and his belief, that the instances to the contrary are to be considered as exceptions to a general rule, or as

consequences of injudicious administration. These opinions he supports, by the evidence of 20 years' experience; by an appeal to the candour of those who have seen the remedy extensively employed; by arguments grounded on the benefit derived, in numerous instances of general indisposition, from the exhibition of mercury, with the view of curing syphilis alone; and by the testimony of professional men of acknowledged respectability. But, for a full display of the evidence on this important subject, we must wait till the appearance of a work on the nature of the hepatic function, to the publication of which Dr. C. has for some time stood pledged. The subject is one of the first importance in the practice of medicine; and every day's experience establishes the extensive influence which a disturbance in the hepatic function exercises over the functions of every other part of the body.

Among the earlier physiologists the liver was considered an organ of great importance, and made the subject of a variety of ingenious speculations; and, in modern days, the term bilious has served to veil the ignorance of many a practitioner in physic. The truth is, that, from the earliest days of medicine, the error of generalizing too much has prevailed. The symptoms of all diseases have been explained on some fancied general principle, or limited to a particular set of organs, or some component part of the body. And the art of healing has been reduced to a system, while physiology, the ground-work of the art, was almost entirely neglected. This error, of beginning at the wrong end, has attached itself to all the systems, from the days of Asclepiades to those of John Brown. The exclusive attention which has been paid to each of these, has no doubt contributed to throw some light on many parts of the animal economy, and the diseases to which they are liable; but no great advance can be made in philosophical medicine, until a more just physiology be adopted; and until we consider, not only the peculiar modifications of disease, which each part, and each function, exhibits, but also the influence which each of these exerts over the others when in a disordered state. A work on the liver,

ounded on these principles;—embracing a view of the hepa-
ic function as it influences the healthy body; the symptoms
rising when it is immediately the seat of disease; the dis-
rders which are sympathetically the result of its derange-
nent; and the disturbances of the hepatic function, which
rise from sympathy with other mental and bodily affec-
ions; is hitherto a desideratum; but one which, we hope, will
e shortly supplied by the labours of Dr. Curry. Acquainted,
s we are, with his industry and intelligence, we cannot but
ook forward to its appearance with much anxiety, and can-
ot too strongly urge the respectable author not to withhold
t long from the world.

ART. XIII. *A Letter to John Haygarth, M. D., F. R. S.*, &c. from Colin Chisholm, M. D., F. R. S., &c. Author of an Essay on the Pestilential Fever: *exhibiting farther Evidence of the Infectious Nature of this Fatal Distemper in Grenada, during* 1793, 4, 5, *and* 6; *and in the United States of America, from* 1793 *to* 1805: *in order to correct the pernicious Doctrine promulgated by Dr. Edward Miller, and other American Physicians, relative to this destructive Pestilence.* 8vo. pp. 272. Mawman.

IT may not be superfluous to recall to the recollection of our readers some of the circumstances to which this publication owes its origin. Dr. Chisholm was resident in the West Indies when the fatal yellow fever appeared, in 1793, and swept off multitudes of Europeans. In the autumn of the same year a similar pestilence occurred at Philadelphia, where it raged with great severity, and proved equally destructive. Subsequent to that period the disease has visited the West Indian Islands, as well as Philadelphia and New York, assuming the same form, and committing similar ravages. In the year 1795, Dr. Chisholm published a treatise on this 'Malignant Pestilential Fever,' which was enlarged and reprinted in two volumes in 1801. In this work the author contended, that the fever was propagated by con-

tagion,—that it was altogether distinct from the ordinary yellow fever, *i. e.* the endemic bilious remittent of hot climates,—that it was not of indigenous origin,—but that the contagion was imported; he went so far as to state the time and manner of the importation, and the vessel in which it was introduced; and also to describe the circumstances of the conveyance of the same contagion to Philadelphia and New York.

Some of the most active physicians of those cities, however, especially Dr. Rush, Dr. Caldwell, &c. of the former place, and Dr. Mitchell, Dr. Miller, &c., of the latter, have maintained an opinion directly opposite to that of our author; contending for the local origin of the epidemic from the effluvia arising from the docks, made grounds, and other sources, in and near those cities; and for the non-contagious nature of the disease, which they consider as an aggravated form of the common bilious remittent fever, of the autumnal season, in America. The physicians of New York, especially Dr. Miller,* and the late Dr. E. H. Smith,† have ' attacked' Dr. Chisholm's doctrines with some ' intemperance,' and have employed sophistry and misrepresentation, Dr. C. avers, in their attempts to confute them. It is in reply to these attacks, and more particularly to that of Dr. Miller, in the Report alluded to, that Dr. Chisholm has again come before the public, fortified by additional evidence in favour of his opinions. The substance of the volume is briefly this.

In pursuance of his object, the author has brought forward his evidence under four heads, or propositions, with a view to confute the statements of Dr. Miller. He maintains, 1. That his opinions are ' not singular,' as Dr. M. has termed them; in corroboration of which, he adduces the opinions of Dr. Stewart, Dr. Gordon, Dr. Dancer, Dr. Blane, &c., who coincide with him in regard to the contagious nature of the

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* See a Report, addressed to the Governor, of the State of New York, by Dr. Miller, Appendix :—in the Edin. Med. and Surg. Journal for 1807.

† See New York Medical Repository, Vol. I. p. 471, &c.

disease in question; and he asserts, that this was generally admitted by the resident physicians of the West Indies. 2. That the yellow malignant fever, and yellow remittent, 'are not precisely the same disease:' in support of which, he states, that Dr. Charlton, who practised at New York, from 1762, and Dr. Bard, who also practised there from the year 1766, affirmed that they never saw the malignant yellow fever before the year 1793. He affirms, likewise, that the filth and crowded condition of the population were greater in New York, during many years previous to 1793, when the malignant fever, nevertheless, did not occur; and that the sources of effluvia, from which the fever was believed to have originated, were purified with great care and industry, in 1795, yet the fever recurred in the summer of 1796. 3. He still maintains, that his deduction of the origin of this malignant yellow fever, (which began at Grenada, and afterwards appeared in other islands,) from the infected ship, Hankey, which arrived from Boullam on the coast of Africa, was correct: and he has brought forward the evidence of Capt. Beaver, who confirms the information which the author had previously received from Mr. Paiba. 4. The last proposition is, 'that in my letter, published in a mutilated form in the Medical Repository of New York, and quoted by Dr. Miller, I have not relinquished the doctrine and opinions I upheld in my Essay.' It appears that Dr. Miller has been mistaken, in supposing that any such change of opinion had occurred. The remainder of the letter, from p. 160 to 216, is occupied by an examination of Dr. Miller's Report; and in this part of the work, the author opposes the statements of other writers to some of those of Dr. Miller, which certainly militate against their accuracy.

We lament, however, that, in this discussion, Dr. Chisholm has betrayed many marks of excessive irritability, and expressed himself in a language, which implies the absence of that philosophic coolness, so conducive to ingenuous discussion, and to clear and unbiassed views; and which was unprovoked, as far as we can judge, by the strictures of Dr. Miller. Upon a subject of so much importance, indeed, a

little warmth of feeling, the result of honest conviction and benevolent zeal, is venial, if not amiable; but where there is clearly no sinister motive operating, as is doubtless the case with Dr. Miller, (we wish we could believe this of all who write on the subject,) a similar indulgence of the feelings ought to be allowed—' petimus, dabimusque vicissim.' We should certainly have perused this letter with greater satisfaction, and perhaps with more conviction, had the charges of sophistry, arrogance, declamation, evasion, &c. been less frequently urged, and in a more temperate tone.

We are not acquainted with any controversial point in medicine of more difficult decision, than the one which is here agitated; viz. the existence or non-existence of contagion in those pestilential epidemics in which no visible or palpable poison is generated. We obtain no direct information by the senses of the existence of a materies morbi, an infectious substance, such as the cutaneous diseases produce: while, on the other hand, the similarity of the progress of both species of epidemic, and the obvious influence of *fomites*, in many instances of the former species, as well as in those which are characterized by cutaneous eruption, induce us to believe, that both are generated and propagated in a similar way. In comparing, however, the many collateral facts, which, in the absence of positive evidence, contribute to elucidate the subject, we find ourselves bewildered by a number of circumstances of opposite import, yet so nearly balanced in point of number and authenticity, that we might yield our conviction on either side of the question, upon rational and apparently solid principles. Hence, perhaps, the warmth of our controversialists, each of whom feels a thorough conviction, founded upon indisputable facts, of the truth of his principles. But how are these facts, of so opposite a complexion, to be reconciled? Must we not suppose, either that the two cases of infectious and non-infectious disease often exist at the same time, or that two epidemics, which have been supposed to be of the same nature, were in fact different; or, in other words, that all the circumstances, connected with the progress of these epidemics,

have not been observed, and that our knowledge of them is still extremely imperfect?

It is Dr. Chisholm's opinion, and it appears to rest upon satisfactory evidence, that this is the case in regard to the yellow fever of the West Indies. He contends, that the proper yellow fever, or bilious remittent of the climate, and the malignant pestilential fever, which he describes, have been confounded under the same name; and that those, who have denied the contagious nature of the 'yellow fever,' have been acquainted with the remittent only. He particularly controverts the opinions of Dr. Pinckard on this subject; and appeals to the contrary opinion of the veteran, Dr. Wright, and others; and he quotes the following observation of Dr. A. Fothergill, with great approbation: 'A bilious remitting endemic fever at Savannah, and in some of the West Indies, though often fatal, is not considered as contagious; and *though often mistaken for the malignant yellow fever of America*, appears to be of a different nature.' Now, even supposing the epidemic fever to be of domestic origin, and not contagious in the first instance, or in the airy and clean apartments of the opulent; yet, that it may become, nay, that it most probably will become contagious (or, if they will have it, infectious,) in the cellars and garrets of the poor, is to be expected from what we know of the origin of infectious fevers. Hence, Dr. Rush admits, that during the epidemic of 1793, in Philadelphia, and those of the subsequent years, there were many instances of the propagation of the fever by infection.* This sort of change in the nature of a progressive epidemic, has been known, at least, since the days of Ovid and Livy.† If all the circumstances, then, are not taken into consideration, facts of the most contradictory tendency may be collected; and as each advocate only brings forward those, which favour the doctrine that he espouses, the inferences of both are necessarily in some degree erroneous.

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* See his Medical Inquiries and Observations, Vol. V.

† See the quotations in our Review of Dr. Adams's Treatise on Epidemics.

We cannot but deem the dispute, in some measure, verbal. Those who contend for the non-existence of contagion, in the epidemics in question, set out by assuming certain requisites to constitute a contagion; such as, its necessary origin from a similar disease, its action in all seasons and places, and its secretion by an obvious action of the vessels, or by 'a peculiar process of the disease, forming a specific and essential part of its character:'* and then they deny the existence of contagion, where these gratuitous premises are not found; even where a disease may be fatally propagated to multitudes, by contact or near communication with a person labouring under the same disease, or by means of his clothes, or other substances impregnated with his discharges, or the effluvia from his body.

Some of the evidence, which Dr. Chisholm has detailed, in further proof that a malignant yellow fever was thus imported, and propagated in the West Indies, &c. is extremely striking. But, say the advocates for the other side of the question, continuing the same *verbal* dispute, 'the source of mistake, on the subject of importation, consists in not distinguishing *a febrile poison, generated by heat and filth in a vessel,* from *contagion taken up in a foreign port, and successively communicated from one person to another.*' And it is then asked, 'On what ground can a disease be said to be *imported,* which has no other relation to a foreign country, than that of being generated in a vessel which has lately visited that country? The foreign country, the outward and homeward voyage, are circumstances of no moment in determining the origin and character of the disease: To account for this, we must consider the filth, the moisture and heat, which, concurring to a certain degree, are destructive to man at all times, in all situations, and under every condition. A fever originating under such circumstances, can no more be pronounced *imported,* than a fracture of a limb, happening at

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* See Dr. Miller's Report, Edinburgh Med. and Surg. Journal, Vol. III. p. 281.

sea, can be called an *imported fracture.*'* The same author, (in language which the reader will recognise as the prototype of that of Dr. Adams,) exclaims in another place, 'the want of due discrimination between the effects of an *impure atmosphere* and of *contagion,* is one of the most lamentable deficiencies in the history of diseases.'†

Now, whether any one may choose to denominate the means of propagation of a fatal fever, contagion or infection, or to deny that these means can be said to be 'imported,' because only brought an indefinite distance across the ocean, and not from the opposite shore, seems to be a topic not worth discussing: especially since it is universally admitted, that the clothes, &c. used by the sick, contain *a poison* capable of communicating a similar malignant fever to other persons, and therefore that the fever, or the poison which excites it, may be *carried into port,* and there communicated. Surely, then, the essence of this question is, whether 'a febrile poison carried into port,' or, 'contagion imported,' are phrases of synonimous meaning?

'Strange, all this difference should be
'Twixt *tweedle-dum* and *tweedle-dee!*'

We shall not recur to the evidence of the introduction of a malignant infectious fever into Grenada, by the ship Hankey, and its propagation to the crews of the adjoining ships, from the *outside* of the harbour, where the Hankey lay, *inwards;* as it is fully detailed in Dr. Chisholm's Essay, formerly published. But we shall quote his account of the *importation* of a similar fever into New York, in 1795, in the ship Zephyr.

'This vessel sailed from a port in St. Domingo, which, we are assured by unquestionable authority, was at the time the very abode of pestilence and death. There cannot be a doubt of the pestilential state of this vessel, and of her having been the true source of the pestilence, which raged at New York in that year: she sailed from a port where the pestilence prevailed to such a degree, as to make the

* Dr. Miller's Report. loc. cit. p. 294. † Ibid. p. 282.

inhabitants and garrison drop, says Mr. Bryan Edwards, like the leaves in autumn. When she arrived at the wharf at the bottom of, or near, Dover Street, she was visited by the officer of health, who found on board of her, three persons ill of fever, and the corpse of one who died that morning, the 20th of July. On the 22d, the officer of health was taken ill, and died on the 30th, with evident symptoms of the malignant pestilential fever, called by the health committee a bilious fever of the malignant kind. On the opposite side of the same wharf lay the William of Liverpool, till now a perfectly healthy ship, although at this wharf several weeks before. The people of this and of the suspected vessel (Zephyr) were employed on this wharf at the same time in unloading their cargoes. On the 25th July, four persons of the William were taken ill with the symptoms of the fever of the officer of health, viz. " a yellow skin, hæmorrhagies, vomiting of black matter resembling coffee grounds, &c. and all died within seven days." The people of the Zephyr either remained on board, or lodged at the adjoining public houses. On the 25th, also, the owner of the ship Connecticut, lately arrived from England, and till now healthy, one of the mates, the steward, and two of the hands, were seized in the same way, and all, except the owner, died. This ship lay about 200 feet from the Zephyr. The owner of the Connecticut was employed about the ship great part of the day, *but ate and slept in an airy part of the town.* Persons were taken with the distemper, about this time, in other parts of the city, who had no connection with the brig Zephyr, nor with any other vessel. Fitch's store stood on the next wharf to where the Zephyr lay. The clerk was taken ill on the 26th, and died a few days after. Dr. Smith says, " three persons, who were in Mr. Fitch's store, were taken sick and died." Dr. Seaman, a strenuous, but candid and reasonable, advocate of the domestic origin of the fever of New York of 1795, says, " the circumstance of so many persons being taken on the same day, renders it highly probable that the contagion of this disease must have been introduced by the Caroline" (mistaken for the Zephyr;) " since, had it arisen from the pre-existing circumstances of the place alone, it is not likely that it would have shewn itself in so many instances at the same time." p. 58, *et seq.*

This evidence, though favourable to Dr. Chisholm's opinion, cannot, however, be deemed conclusive: there is no direct tracing of the contagion from individual to individual,

nor even from one part of the town to another; and the concurring attack of several persons at the same time, it must be acknowledged, only proves a simultaneous exposure to the exciting cause, which might be either contagion, or putrid effluvia, as the advocates for the domestic origin of the disease contend. But Dr. C. has brought forward other facts, by which the actual propagation of the fever in other instances is more satisfactorily shewn. Dr. Blane,* and others, have stated some indubitable proofs of a similar propagation of the malignant yellow fever. The following testimony of Dr. Stratton corroborates these statements, and evinces the action of infection, under circumstances in which it is admitted that it seldom operates, and in which its operation is altogether denied by those who attribute epidemics to impure atmosphere; namely, in the country.

'In the year 1797, I saw seven cases, all these were inhabitants of this neighbourhood, five of them had been to Philadelphia; of these, four died: *two cases of the disease being communicated*, one died, with all the distinguishing symptoms of the most unfavourable cases, the other recovered.' p. 66.

But the most extensive diffusion of the disease took place in 1798, when forty-two cases occurred to Dr. Stratton: 'Of these nineteen died, twenty-seven had retired with the disease from Philadelphia or Wilmington, and *fifteen received the infection by communicating with them*. One person, a young lady, fled from Wilmington to the opposite shore of Jersey, was attacked about a week after her flight, communicated the disease to her uncle, her nurse, and a young man who visited her. Two of the four died.' *Ibid.*

To contend that, in these instances, the atmosphere must have been *impure*, were surely begging the question; and to dispute about the propriety of applying the term, *contagious*, to an influence which the ordinary acceptation of the word universally implies, were to render the discussion, as before, merely verbal. It cannot be questioned, we apprehend, as

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* Letter to Baron Jacobi, in the Edin. Med. and Surg. Journal, Vol. III.

to matter of fact, that a poison, capable of generating a similar disease in others, under certain circumstances, may be transported from one place to another, either in fomites, or connected with a person diseased. That the circumstances, which are requisite to forward the propagation of the one poison, are not necessary to the communication of the other, (the specific contagions,) is equally true. But if, to use the argument of Dr. Bayley,* in the former case, (of the infections,) the cause were to be found in the impure atmosphere alone; and if, in the contagion, it arose from the morbid secretions of the patient; then, in the former, some *one* disease should be the result in all cases; whereas, we know that it is the particular prevailing disease only which is propagated, be it dysentery, typhus, yellow fever, &c.; nay, we know, that still more local symptoms are thus communicated in these 'infectious atmospheres,' such as erysipelas,† &c.: all of which implies the generation of a *particular poison* in the bodies of the sick. This is remarkably true with regard to dysentery: Dr. Lind‡ observes, that, when one person has been admitted into an hospital with a flux, several other patients in the same ward have had this symptom added to their other complaints; and Dr. Blane‖ likewise remarks, that if a ship's company be predisposed to acute diseases, and one or more persons labouring under dysentery are brought on board, this soon becomes the prevailing disease. These facts surely evince the personal secretions to be of a particular nature, and that it is not a mere general impurity of the atmosphere which is the exciting cause of this variety of distempers, although it undoubtedly contributes to the propagation of it.

This view of the subject would lead us to coincide with Dr. Chisholm; and, indeed, we cannot doubt, that a malig-

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* See our Review of Adams on Epidemics.

† See a paper entitled, 'On some epidemical Effects,' by Sir W. Blizard, in Med. Facts and Obs. Vol. II. ‡ On Fevers and Infections.

‖ On the Diseases of Seamen.—See also Dr. Hossack's Letter to Dr. Chisholm, Edin. Med. and Surg. Journal for Oct. 1809.

nant fever, characterized by a yellow suffusion of the skin, black vomiting, and other symptoms, (which also belong to the bilious remittent, though less severe, perhaps, in degree,) is propagated in hot climates, like the plague and typhus in temperate ones, by effluvia either directly from the persons of the sick, or adhering to certain substances. We cannot, however, acknowledge ourselves convinced of the decided difference of the two diseases, except in the degree of severity, and cannot suppose, that there is no foundation for the statements of Pinckard, Moseley, and, if our memory be correct, of Hillary, that the remittent and continued forms of the disease occasionally pass into each other.

But, although we are disposed to consider the heavier portion of evidence to be in favour of the existence of contagious effluvia, as the medium of communication in those epidemics in general, we must admit that there are some facts which militate against this notion, and give some foundation for the opposite opinion: were it otherwise, indeed, the acknowledged talents of a Rush, a Miller, &c. could not have been ranged on that side of the question. The occurrence of the epidemics only during certain seasons, their cessation with the return of a certain temperature, their frequency in towns which are ill drained and paved, and their diminution or disappearance when a system of cleanliness is adopted, (as has been evinced in most of the cities of Europe,) and, perhaps above all, the safety with which people return to the infected habitations, on the cessation even of the plague, with the change of season; all these circumstances tend to throw some doubt on the existence of contagion in the epidemics alluded to. But although remittent fevers, of a very fatal nature, are constantly observed to arise from the effluvia of wet ground, and of dead animal and vegetable matter, we cannot trace the origin of the plague directly to such sources: it is probable that these effluvia may render the infection of the plague more malignant; and that, as the impure air of a crowded habitation gives an activity to an infection introduced, so the atmosphere, impregnated with miasmata, may

impart an adventitious virulence to the imported infection of the plague. The fact, that even *fomites* lose their infecting power, when the plague ceases, is equally inexplicable, whatever doctrine we may espouse. For that such *fomites* contain a most virulent poison, however generated, the circumstances of the Black Assizes, and numerous facts connected with the history of the plague, abundantly prove: and, therefore, the fact, that a great change in the atmospheric temperature, such as a severe frost, in the northern climates, or extreme heat, in Egypt, destroys this poison, is not to be invalidated by our inability to explain it. This poison is not the less a poison, because it is more easily decomposed by heat or cold, than the virus of small-pox or scarlet fever. Besides, there are facts on record, which render the doctrine of the indestructibility, or unceasing activity of the specific contagions, while there are subjects to act upon, very questionable, or, rather, tend to subvert it altogether. Such is the account of the cessation of small-pox on board the Royal George, at sea, which we have stated from Dr. Lind.*

On the whole, the opinion which Dr. Chisholm has here defended, appears to be founded on more stable grounds, than that of his adversaries; and his evidence is, perhaps, nearly as good as the nature of the subject will admit of. As to the general question, the propriety of adhering to the distinction between infection and contagion, or between contagion and specific contagion, (the phrase is immaterial, so it be definite,) is obvious; but it has been carried to an erroneous extent, almost to the denial of the existence of poisonous influence on the part of the 'infections;' by which the discussion has become principally verbal. We think the subject has been stated in its true light by Dr. Hossack, in the letter to Dr. Chisholm, to which we have already referred.

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* See our Review of Adams on Epidemics.

ART. XIV. *Observations on the Management of the Insane, and particularly on the Agency and Importance of humane and kind Treatment in effecting their Cure.* By Thomas Arnold, M. D. Fellow of the Royal College of Physicians, and of the Royal Medical Society of Edinburgh; senior Physician to the Leicester Infirmary, and sole Physician to the Leicester Lunatic Asylum. 8vo. pp. 61. Phillips.

IN endeavouring to read this pamphlet, we have had to keep up such 'a constant strife with nature,' as Lord Shaftesbury expresses it, that we really feel at some loss how to describe its contents, otherwise than by saying, that they are most insupportably dull, and tend to no other object, as far as we can discover, but the recommendation of 'the Leicester Lunatic Asylum' under the superintendence of the 'humane and kind' Doctor Arnold. The author congratulates his countrymen 'on the *improved* and *improving* state, in this island, of the unhappy lunatic in his confinement; to whom, instead of suffering, which was formerly more or less general and grievous, *it is now not uncommon*, as far as the nature of his disorder will permit, *to receive kindness and comfort;*' he congratulates 'them on the prospect of much improvement in the cure of this disorder;' and yet he thinks it necessary to write a dissertation on such self-evident texts as the following:

'1. Very particular care should be taken that they [lunatics] neither injure themselves nor others; nor be subjected to any probable means of injury.

'3. No pains should be spared to procure their ready and quiet, or at least their actual submission, to all due control. Authority over them is absolutely necessary; to the attainment of which, firmness and resolution will greatly contribute.

'7. Their use of proper exercise must be diligently regulated and exacted; and their exercise must be varied, as their cases may require, in kind, degree, frequency, and duration.

'8. They should be allowed, under certain circumstances, and, when necessary, even urged to, various amusements and recreations of mind and body.'

But the motives of publication appear no longer equivocal, when we find Dr. Arnold labouring, in the concluding paragraphs, to prove the superiority of *his* Lunatic Asylum over all other lunatic asylums, and affirming, that 'TWO THIRDS of the insane patients committed to *his* care in that institution, have been sent home again to their friends perfectly restored to soundness of mind and understanding;' and, that the proportion of deaths is only 'ONE to THIRTEEN AND A HALF; while the number of cures in the most celebrated hospitals of Europe, such as those of London and Paris, does not, as Dr. A. admits, exceed ONE THIRD, and the deaths are as ONE to SEVEN. 'In the hospital of Charenton in France,' he observes, 'famous in that country for its numerous conveniences and accommodations every way adapted to the cure of the insane, *and celebrated for its actual cures*, the number of those sent out freed from insanity in a given time was *thirty-three* out of *ninety-seven;* that is, *one third* of the whole.' —'In the hospital of Charenton, as Dr. Pinel informs us, the proportion of deaths is *one* in *seven*.'

Now, of what materials must that man's face be composed, who can draw such an advantageous comparison between his own practice and that of his brethren, without attempting to substantiate his assertions by one single document, and yet expect to obtain credit from any person of common sense? Of Dr. A.'s merits we know nothing, except from his books. These, indeed, have not inspired us with any very high notions of his skill in discerning and treating mental disease; but it is possible, that he may possess talents, in practice, of which he can convey no idea by his writings. Supposing this to be the case, and admitting, for a moment, that he has really had the success which he describes, is he not bound by every moral duty, to come forward and prove, beyond the possibility of doubt, the fairness of his claims? Is it candid, is it honest in him, to insinuate this direct censure of the most respectable practitioners, in an important branch of the art, and to alarm the minds of those whose friends and relations may be committed to their cure, by telling them, almost in so many words, 'Trust not Dr. Monro, beware of

Dr. Simmons, and send not any patients to Dr. Pinel; under them the chances are *two* to *one* against recovery; but repair without delay to Doctor Arnold at Leicester, who cures twice as many madmen as any other physician in Europe, and in whose comfortable asylum only one half the usual number of insane persons die. Such are the advantages of his kind and indulgent treatment?'

Art. XV. *Observations on some of the most frequent and important Diseases of the Heart; on Aneurism of the thoracic Aorta, on preternatural Pulsation in the Epigastric Region; and on the unusual Origin and Distribution of some of the large Arteries of the human Body; illustrated by Cases.* By Allan Burns, Member of the Royal College of Surgeons, London; and Lecturer on Anatomy and Surgery. 8vo. pp. 322. Murray. Printed at Edinburgh.

The light thrown upon the history and progress of diseases, by an examination of the dead body, has seldom been so great as might have been expected. Unfortunately, more industry has been employed in filling our museums with rare examples of diseased structure, than in obtaining well-authenticated and well-arranged details of the symptoms which accompany their formation. Of what avail is a catalogue of preparations? What service does that man render to the practice of medicine, who labours merely to acquaint his brethren with the devastations committed by disease, without giving them any information, either respecting its mode of attack, or the means by which it is to be combated? The healing art is not to be advanced by recording medical wonders. The difficulties that we encounter in our classification and treatment of daily occurring diseases, must be overcome, before we can derive much aid from an anxious pursuit of the more unusual varieties. While our collections, therefore, of morbid parts afford us melancholy monuments of the ravages to which our frames are exposed, their utility should be estimated by the illustrations which they supply of the combinations and progress of symptoms.

In defiance, however, of these considerations, how many men have laboured, not to increase our knowledge of disease,—not to ascertain important pathological or physiological facts,—but to augment the list of their preparations? In their zeal to accomplish this purpose, many seem absolutely to have forgotten, that the diseased mass, which they contemplate with so much complacency, once entered into the composition of a human being;—that its growth was attended with a series of sufferings, which had a painful influence upon the character and comfort of the patient;—and that our art is useful and respectable, only in proportion to the certainty and facility with which it can detect the origin of these sufferings, arrest their progress, or alleviate their effects.

A judicious and faithful enumeration of symptoms, a strict attention to the operation of medicines, and a minute examination of the diseased body, comprise the sources of all the information that can be acquired, respecting the nature of any complaint. When these different species of investigation are combined in any one case, we have done all which it is in our power to do. When, however, men rest satisfied with the last stage of the process, our knowledge is necessarily imperfect. Morbid parts, dissected and prepared in the most careful manner, unless associated with all that renders them interesting to us, as living and sensitive beings, may gratify a certain kind of curiosity; but they fall far short of the best purposes to which they might have been rendered subservient. Had not the unwise method to which we have alluded, been too frequently adopted, is it possible to conceive, that so many interesting points, concerning the distinguishing characters of the most frequent and important diseases, should at this day be undetermined;—that we should not know what symptoms are peculiar to one change of structure, and what to another;—and that our treatment of many affections should be so uncertain and unsuccessful?

The difficulty of obtaining precise and satisfactory results from medical observations, must be admitted by every one, who contemplates with attention the objects of our profes-

sion. Unfortunately, the peculiarities of individual constitutions are so imperfectly ascertained; the ignorance of the nature and functions of most of our organs is so great; and the changes induced by disease are so insidious; that we frequently learn nothing of the actual state of the disease till all our exertions are fruitless. The wisest know the force of these obstacles, and are compelled to bewail the insufficiency both of their diagnosis and their practice. This diffidence and distrust are not to be met with among the ill-instructed and the ignorant; it is one of the dismal conclusions of the most extensive experience, and the most patient and best conducted researches.

Convinced, therefore, as we are, that our progress has been retarded, as well by the nature of the subject, as by a faulty method of investigation; we must be permitted to remark, that a scientific pathologist has something more to do than to collect and arrange his preparations. It is a much more easy matter to describe the seats of tumours, their size, their consistence, and all their other characters, than to detect the first approaches of the disease by which they are generated,—to mark its different aspects throughout its course,—and to ascertain the causes by which its advancement is impeded or accelerated. We have hundreds of authors who have acquired reputation for their skill in the first branch of this study: how few can claim an honourable distinction for their success in the second! We scruple not to aver, that the advantages derivable from the one are precisely in proportion to the assiduity with which the other has been cultivated.

We do not, however, mean to speak disrespectfully of the study of morbid anatomy. When carried on with a distinct knowledge of the end that it is intended and calculated to serve, it promises to do much for the advancement of our art. We speak merely against those confined and unproductive inquiries, which occupy the attention of some men, to the exclusion of all that can add value and certainty to the practice of medicine.

The foregoing observations have been suggested by a contemplation of the subject of the volume before us; and we

think that they are particularly applicable to the pathology of the heart. The mechanism and functions of this organ, are better understood, than those of most others in the body. Numberless examples of disease of its different parts are every where to be met with; and yet such is the state of medicine, that, at this hour, we can scarcely present a satisfactory history of any one of them. This never could have happened, had our clinical observations been as accurate and frequent as our dissections.

Mr. Burns, as a lecturer at Glasgow, delivered the substance of what is here written to his pupils at that place. He is evidently an acute and intelligent observer, though we discover in the execution of his work many marks of negligence. As a whole, however, it ranks above many of the medical publications of the day; but it neither displays the copiousness, the learning, nor the research, that is to be met with in other writings on the same subject. We are compelled to make these remarks, notwithstanding the statement contained in Mr. Burns's dedication to his pupils. 'No treatise,' he says, 'has yet appeared, presenting a connected view of the causes and consequences of the various diseases to which this most important organ is liable.' This deficiency, we are led to infer, called forth the present work. When this sentence was written, Mr. Burns was surely not aware of the expectations which it would necessarily excite in the mind of his readers. He must have forgotten, that Senac spent twenty years in the composition of his admirable book; a book almost unequalled in the history of our art, for accurate, extensive, and original information, and which will not suffer by a comparison with any thing that has been since written on the same subject.

Mr. Burns, for the purposes of arrangement, divides the diseases of the heart into three classes:

'The first class containing the sympathetic affections of the heart, or those diseases which are dependent on the consent which this organ has with other parts of the body; the second, those affections which are brought on by such malconformations of the heart, as give rise to a mixture of the venous with the arterial blood; and the third, those diseases, induced by some organic affection of the heart, which

mechanically impairs the circulation, but does not necessarily alter the composition or properties of the blood.

'It is not my intention,' he continues, 'to lay before you any remarks at this time on the first of these classes; and, in treating of the other two, I shall endeavour to select only the most frequent and important diseases for particular discussion, and chiefly such as I myself have had an opportunity of seeing.' p. 2.

Here, then, the 'connected view,' which we were led to expect, is dissolved. The last class may be considered as independent of the second, but it is by no means so of the first; and we are satisfied, that no true or intelligible view of the causes and consequences of the diseases of the heart can be obtained, unless the efforts of both are examined and estimated in conjunction. The heart is an organ, which not only suffers from its 'consent' with the other parts of the body, but also from its liability to be affected by all sudden or violent external impressions. The passions exert their principal influence upon it, and, in numberless well-authenticated cases, have been the means of inducing very remarkable changes in its structure. During the violence of revolutionary tumult, diseases of the heart and large vessels were observed to be more frequent in France, than at any former period;* and examples to the same purpose may be produced by almost every observer.

But, though our author has not deemed it necessary to enter upon this view of the subject, he has pursued the other parts of his inquiry with much zeal and ingenuity. His remarks on the functions of the organs of respiration and circulation form a proper and necessary introduction to the investigation of their pathology. On these points he is, for the most part, correct; though some of his explanations are drawn up in rather a loose manner, and without sufficient attention to the phenomena that he wishes to explain.

The mode in which the older pathologists examined the structure and functions of the heart, was not well calculated to supply accurate information concerning the symptoms

* Dessault.

that characterize the diseases of its different parts. Since their time, more successful investigations have led to a degree of certainty in distinguishing the affections of this organ, to which our predecessors were strangers. Much, however, remains to be done, before the complicated sufferings, which arise from diseases of the thoracic viscera, can be distinguished from each other. The functions of these parts are so intimately united together, that no material interruption can take place in any one of them, without speedily involving all the others in its consequences. Whatever prevents the chemical changes which are effected in the lungs from being accomplished, or interferes with the mechanical movements of the thorax, must obviously affect the properties of the blood, derange the actions of the heart, and ultimately the functions of all the other organs of the body. When, again, the current of the blood is either altered or impeded, in consequence of malconformation of the heart itself, or disease of any of its parts, similar events are produced; but other symptoms are superadded, which vary according to the peculiarity of the function of that part of the heart which may happen to be disordered. It is with the latter that we are at present chiefly concerned.

We have already expressed our doubts of the propriety of our author's general classification of the subjects of his treatise; but there is an error in one of its subordinate parts, which must be reprehended. The second class of diseases, we have seen, refers to those malconformations which 'give rise to a mixture of the venous with the arterial blood.' But this division is scarcely announced, before the effect of it is destroyed by the arrangement of the different species of these *malconformations*. They are as follow:

'*Species first.* Where the aorta originates equally from the right and left ventricle.—*Species second.* Where the foramen ovale and ductus arteriosus remain open.—*Species third.* Where the ductus arteriosus is obliterated, but the foramen ovale remains pervious; or a preternatural opening leads from one ventricle to the other.—*Species fourth.* Where the pulmonary artery is impervious at its origin, but still receives a small portion of blood by a retrograde action of the

ductus arteriosus.—*Species fifth.* Where the heart merely consists of two cavities, an auricle and a ventricle, and where, from the latter, a vessel originates, which afterwards divides into two branches, one to the lungs, the other to the body.—*Species sixth.* Where the mitral valve is mal-formed, leaving merely a small opening, leading from the left auricle into the ventricle.'

All these remarkable varieties are illustrated by the detail of cases. The consideration of them is, on many accounts, interesting both to the physiologist and the pathologist. In this light they are properly examined by our author, and his commentaries upon them are useful and satisfactory. But, with submission to Mr. Burns, we must observe, that the *last species* has no business in its present situation. It is quite at variance both with the definition of the second class of affections, and with most of the symptoms which are stated to characterize them. Guided by this definition and this arrangement, we must believe, that a mal-formation of the mitral valve produces 'mixture of the arterial with the venous blood,' a circumstance which, Mr. Burns knows sufficiently well, cannot happen. The reader, however, who may not know this as well as Mr. Burns, is allowed to remain in this belief, till he arrives at page 29, when it is somewhat awkwardly stated, 'that this malconformation produces its bad effects, by preventing the arterialization of the blood, and not, as in the former instances, by intermixing the arterial with the venous blood.' Carelessness of this kind may pass unnoticed in the loose declamatory harangues which a teacher delivers to his pupils; but in a work, with pretensions like the present, it should have been avoided.

The remarks on the third class of affections contain much valuable information. The author first treats of 'uniform enlargement and dilatation of the heart.' Here he controverts the opinions of Bell, Ferriar, and Portal, relative to the symptoms of this disease. These authors describe it as attended with a 'confusion and a struggling in the chest, an inexpressible anxiety and inquietude about the heart, with a weak, irregular, intermitting, fluttering pulse.' p. 40. The latter signs do not, as Dr. Ferriar supposes, belong to simple

dilatation of the heart, but to ' enlargement of the solid substance of this organ, or to dilatation of the cavities, combined with chronic inflammation and adhesion of the pericardium.' p. 41. In the ' cases of genuine unmixed dilatation,' which our author has seen, ' the patients have complained of an oppression in the chest; of a sense of occasional suffocation; the pulse has uniformly been full, slow, and soft, even in one instance beating so low as eleven pulsations in the course of a minute. The heart has been felt contracting sluggishly and equally in the chest. There have been dropsical symptoms, blended with a stomachic ailment, and with torpidity of the bowels. It is very rare to see a case of dilatation proceed to a fatal termination, without the accession of chronic inflammation; and, if this once commence, the whole complexion of the disease is changed, and the symptoms, as described by authors, are induced. Where chronic inflammation does not supervene, dropsy of the pericardium often comes on.' p. 42.

The section ' on partial dilatation of the heart,' is written with much spirit and ingenuity. The discussion of the disease, we believe, is accurate, and the ' ratio symptomatum' is founded upon correct views of the physiology of the thoracic viscera.

Next follows an interesting discussion upon ' chronic inflammation of the heart.' The diagnosis of this disease is very far from being complete, but the author has collected a great many valuable facts, which ought to be more generally known, and bear flattering testimony to the skill and dexterity with which he has investigated the singular combinations of symptoms, that usually mark the progress of this affection.

' Very frequently,' he observes, p. 58, ' dilatation of the heart is complicated with chronic inflammation, and adhesion of the pericardium to the surface of the heart, by which the symptoms are much modified, and the whole complexion of the disease altered. In this disease, (chronic inflammation, we believe,) the pulse is always frequent, irregular, and jarring, the reverse of what takes place in simple dilatation, where it is slow, full, and extremely sluggish; and also

in the former disease a curious circumstance occurs; the enlargement appears to go on with extreme rapidity, is uniformly accompanied with a febrile affection, and generally an acute pain is felt in the abdomen. As none of these symptoms are ever attendant on unmixed dilatation, their presence is to be considered as pathognomonic of this complicated disease. The pain is often seated in the hypogastrium, and I have even found it accompanied with actual suppression of the urine, and that in a case, where dissection shewed there was no organic affection of the urinary organs themselves. Frequently, likewise, the pain is referred to the epigastrium, where there is often an evident pulsation felt; but this pulsation of the epigastrium is rarely perceived, till the disease be pretty far advanced. The pulsation is frequently so conspicuous, as to give rise to a supposition of the patient having aneurism of the cœliac artery.'

In this and the subsequent divisions, the reader will find much valuable matter. But when we compare the symptoms, as they actually occur, with those which are said to indicate chronic inflammation of the heart, we are bewildered and perplexed, and obliged to declare that his *signs* are of little use in establishing our acquaintance with this malady.

The cases must always possess value, whatever denomination may be conferred upon them; but, assuredly, several are ranked as specimens of this disease, many of the symptoms of which may, and ought to be referred to other sources. This, we think, is clearly proved by what follows.

'I have just related,' says the author, p. 85, 'a number of cases, from the works of practical authors, and from my own observation, to shew, that in chronic inflammation of the heart there is seldom any pain felt in the chest. A case of this affection, in some respects curious, lately came under the notice of Dr. Poole, and was after death examined by that accurate anatomist, Dr. Barclay, who politely sent me a description of the symptoms and morbid phenomena, with permission to publish them. Dr. Poole observes, "the patient was aged fifty, a strong muscular man, rather above the usual height, no way corpulent, and of very temperate habits, by trade a mason." He had constant pain, or rather soreness in the left side and breast; his breathing was generally laborious, and, when going up a hill or stair, or when walking quick, was almost suspended. He was con-

tinually harrassed with a hard cough; and Dr. Poole says, "I was much struck, and, on his account, greatly alarmed at the irregularity of his pulse, to which he claimed my particular attention, as he had long thought it a very queer one: at times it did not make above thirty beats in a minute, in consequence of an intermission frequently taking place, and continuing during a space in which from three to eight or more ordinary pulsations might have been performed. This intermission, however, was so inconstant, and the irregularity of the beats so great, as to regard [observe] no ratio I could discover. The pulse was always exceedingly weak, small, and sunk, or, so to speak, concealed. About two months before death, he became dropsical in the lower extremities, and nearly about the same time, a swelling or protuberance was observable in the right hypochondrium, extending to the epigastrium: this was exceedingly painful on pressure, and continued till his death without any perceptible change. The œdema of the limbs was removed, but his breathing became more and more difficult; and a fortnight before his death the whole of the right side became paralytic."

'Dr. Barclay opened the body, "and there were six English pints of water in the thorax. The lungs were tuberculous, and adhering to the pleura and pericardium; the left lung was much condensed, and incapable of expansion by air. The pericardium adhered to the parts, with which it was in contact, through the medium of a layer of organized coagulable lymph, of a very pale straw colour: this, by a slight force, was readily separated from both the heart and pericardium. The apex of the heart was uncommonly soft, for a space equal to the size of a filbert. On opening the heart, an aperture was found, in diameter as large as that of a goose quill, in the vestigium foraminis ovalis, by which the two auricles communicated."

Now, we beg leave to ask Mr. Burns, on what authority he refers the symptoms of this case to chronic inflammation alone, at the very time that he tells us, that so much disease existed in other parts? Perplexed, as every one must be, by this statement, we are still more so when we recollect, that in one case 'chronic inflammation of the heart' is said to have 'put on the resemblance of a disease of the bladder;' and that, in another, 'it assumed the likeness of a uterine affection.' p. 68. In the first instance the pulse was small, hard, and frequent, 'attended with great anxiety of counte-

nance, a constant pain in the pelvis, and complete retention of urine.' p. 67. In the other *there were no signs* by which one could have been led to suspect the existence of disease of the heart:'—' the *pulse was very small and frequent.*' p. 70.

By comparing what we have now written, with the author's former description of the disease, our readers will discover contradictions and inconsistencies, which appear with a very bad grace in a book of this nature. He first peremptorily lays down the pathognomonic signs of this affection,—then declares, that it may exist without any of these signs; and, lastly, makes these very signs the standard by which he regulates his decisions concerning the existence or non-existence of this disease.

All that has been said must convince our readers, how little is really known respecting the symptoms of this interesting disease. The method of cure is, of course, involved in equal obscurity. Blisters, laxatives, and carminatives, it is said, sometimes alleviate the most distressing symptoms; detraction of blood, we are informed, does not produce ' the marked advantage, which results from its use in simple inflammation.' p. 92. It is obvious, however, that little reliance can be placed upon our speculations respecting the operation of remedies, in a complaint which is so difficult to be ascertained. As far as our own experience goes, we are disposed to think more favourably of blood-letting in this disease, than our author. In two cases, at least, which we are strongly inclined to refer to this class of affections, its good effects were obvious in curing one of them, and in relieving the other.

The subject of chronic inflammation of the heart, is terminated by a disquisition on palpitation, where the author shews that this term is frequently misapplied, and that this symptom is supposed to exist under circumstances where the structure of the heart and pericardium prove that it cannot occur.

The other parts of this volume contain observations on the effects produced by diminution of the size of the heart—on the consequences resulting from change in the structure of the substance of the heart.—On disease of the coronary

arteries, and on syncope anginosa.—On the effects resulting from change of structure of the valves of the heart and large arteries.—On the formation of polypi in the heart.—On aneurism of the thoracic aorta.—On the causes of preternatural pulsation in the epigastrium.—And remarks on the unusual origin and course of some of the large and important arteries of the human body.

While treating of the consequences from change of structure of the substance of the heart, the author maintains an opinion respecting the influence of this organ upon the motion of the blood, which we think is erroneous. He does not look upon it as the 'most active agent in the natural circulation, but merely as a reservoir for the arteries,' p. 119; supposing, that the ventricles only 'propel the blood with due vigour into the arteries, and that they of themselves circulate it.' p. 126. We cannot now enter upon this extensive field of discussion; though we believe, that this statement is in direct opposition to fact, and to the conclusions of a learned and ingenious physiologist, who has lately paid much attention to this subject.* The arguments of the author by no means establish his point, and he supports them by a declamatory style of reasoning, which ill accord with the precision required on such topics, and which we have had occasion to lament in several other parts of his book.

We do not think it necessary to enter more minutely into the analysis of this treatise; because no man who wishes to study the subject ought to rest satisfied with any abstract. Much, however, as we admire the industry and zeal of the author, in collecting information, and in recommending, by his own example, an unwearied attention to the phenomena of disease; we think, that he cannot always be trusted as a safe guide in teaching us to discriminate between the various affections of the heart. We have produced instances to shew, that he has been hasty, and not always successful, in his

* Dr. Young. See Phil. Trans.

decisions; but the time is probably not yet arrived for introducing into this subject, that accuracy and distinctness of classification, which we think is perfectly attainable.

Art. XVI. *An Exposure of some of the false Statements contained in Dr. Carson's Pamphlet, entitled, 'Remarks,' &c. In a Letter addressed to that Gentleman.* By James Dawson, Surgeon. 8vo. pp. 32. Printed at Liverpool.

Art. XVII. *Reflections occasioned by the Perusal of a Pamphlet, entitled, 'A Vindication of the Opinions delivered by the Medical Witnesses for the Crown, on a late Trial at Lancaster.* By D. Campbell, M. D. 8vo. pp. 54. Printed at Liverpool.

Mr. Dawson is one of those gentlemen to whom we alluded in the review of the pamphlets on Miss Burns's case, contained in our former volume, as having incurred the displeasure of Dr. Carson, by the support which he lent to the authors of the 'Vindication;' and the letter, of which we have given the title, is written solely with the view of repelling the attack which Dr. C. had made on his moral and professional character. Though willing to make every due allowance for the jealousies and the heart-burnings, which were almost necessarily engendered in a controversy so nearly affecting the reputation of both parties, we found it impossible to excuse such a degree of virulence as was evinced in the management of the dispute, or to overlook the bitter invectives, which were levelled by Dr. Carson at all who dared to entertain different opinions from his own. The charge, in particular, which he brought against Mr. Dawson, was one of a very serious nature, and such as no man of honourable feelings could allow to pass unnoticed and unanswered. Having impugned the opinion which Mr. Dawson had given on the case in question, and accused him of a misrepresentation of facts, the Doctor proceeded to insinuate, that he (Mr. D.) is one of those who are 'very convenient for supplying

appropriate cases to any who may be in want of them;' that Liverpool is a residence well adapted for those who wish to publish on medical subjects; that they need only mention '*what cases and facts they want*,' and that Mr. Dawson and another gentleman, '*have such cases and facts ready made, or nearly so, requiring only some slight touches, to be adapted to all occasions.*' Such an accusation ought certainly not to have been preferred on light grounds, or without the fullest proofs; and, for our own parts, we have no hesitation in condemning Dr. Carson's conduct on the occasion, as illiberal and indecent in the extreme; but, as the quarrel is one so purely personal, we think the fairest mode of proceeding is to put our readers in possession of the letter of Mr. Dawson, which drew down such heavy wrath upon his head, and enable them to judge for themselves, whether it justified such animadversions on his general character.

'MR. HAY.

'DEAR SIR,—I have carefully examined the uterus in your possession; and although it is more than six months since it was removed from the body, the following appearances cannot, in my opinion, be satisfactorily accounted for, from any disease to which the internal surface of the *uterus* is liable. The thickness of the parietes of this *uterus*, (proportioned to its distended state) and the increased size of the vessels running through its substance, could scarcely be required for a state of disease, for the nourishment or support of hydatids. On its internal surface, for a certain extent around the fundus, there are seen a number of oval spaces, or open orifices of vessels, many of them capable of receiving the extremity of a large-sized bougie: several of these cells may be elevated together, by blowing air into any one of them, and their bases are then seen dipping, in an oblique direction, into the substance, and between the fibres of the uterus: these appear to me to have been joined to corresponding cells or vessels of the *placenta*, and they occupy so much of the surface of the *uterus* as I imagine the *placenta* might cover; this cellular appearance obtains no where else; for, on the remaining surface, fasciculi of the muscular fibres are distinctly seen, and there are here no open orifices of vessels. That impregnation had at some period taken place, is proved beyond a doubt, by the presence of a *corpus luteum* in one of the ovaria.

'Although to my mind these appearances furnish ample proof of this *uterus* having contained a fœtus at or near the full growth, yet, as I have lately had an opportunity of opening the body of a young woman, who died from inflammation of the *uterus* and other viscera, on the 5th day after delivery, of a child at or about the 6th month, it may not be superfluous to observe, that the mark of the *placenta*, though very obvious, was not more clear, satisfactory, and decisive, than the mark in this *uterus* in your possession, which it resembled in every respect—there is a difference in the thickness, the effect of inflammation, and the effusion of coagulable lymph into its substance: this circumstance, added to the premature expulsion of the child, will also account for the *uterus*, to which I allude, being of a less size, than that taken from the body of Miss Burns, which is now in your possession. 'I am, respectfully, yours,

'*Mount Pleasant*, 13*th Oct.* 1808. 'JAS. DAWSON.'

Of Dr. Campbell's pamphlet our account shall be short, as, after the full, and we trust satisfactory, view of the general merits of the question which we have before given, our readers would probably be not much inclined to reconsider the controversy. Dr. Campbell was subpœnaed at the trial, along with Dr. Carson, on the side of the prisoner, but was not examined. The authors of the 'Vindication,' deeming his appearance suspicious, as he had had no opportunity of learning the particulars of the case, except from report, passed some reflections on his conduct, which, perhaps, might have been as well spared; and drew from him the present defence, which may be considered as a sort of appendix to that of Dr. Carson, being written in the same style, and in the same temper.

There is, however, one circumstance bearing upon Miss Burns's case, which has come to our knowledge, and which we think it our duty to mention. Some time after the trial, a *corpus luteum* was found in one of the *ovaria*, which is adverted to in Mr. Dawson's letter, and which the authors of the 'Vindication' considered as 'a proof beyond all contradiction, that Miss B. had once, at least, been pregnant.' Dr. Carson objected to this proof, and took some pains to shew, that *corpora lutea* might exist in the unimpregnated state;

and as the argument rested on an *ex post facto* discovery, we were inclined, in some degree, to concede the point. Some of the gentlemen interested in the dispute have since had an opportunity of examining several bodies of women who had died soon after delivery, and, in two cases out of three, no *corpus luteum* was found; so that, contrary to received opinion, this appearance ought, by no means, to be considered as an infallible concomitant of pregnancy.

ART. XVIII. *A Treatise on the Use of Mercury in certain Diseases.* By W. Maiben, M. D. 8vo. pp. 31. Evans and Ruffy.

THIS is one of the most puerile, we had almost said infantile, performances which it has fallen to our lot to peruse for a long time. The whole work consists of 30 pages and a half; of which more than one third is filled with a list of the different preparations of mercury in common use, which may be found much better detailed in the ordinary pharmacopœias; and the remaining two thirds are composed of observations on the use of mercury in 34 different complaints, so common-place, that a student of medicine of six months' standing would have found not the least difficulty in the compilation.

We can assure our readers, that it is totally destitute of novelty, that it does not contain one fact from the author's own observation, and affords the most meagre and scanty details of the opinions and experience of others. But though we have no facts of his own from the Doctor, we have a few ingenious and novel suppositions, ushered in with a modest, 'perhaps,' 'it is probable,' 'there is little doubt, &c.' Thus, 'in the common fevers of this country, where bilious symptoms, costiveness, ischuria, or obstructions of any kind exist, no medicines are superior to a mercurial purge; some mild or saline cathartic, such as castor oil, or tartarized soda, being given soon after to carry it off by the bowels; and, *perhaps, in general,* it may be no bad practice, in the beginning

of these fevers, to give some mild emetic of antimony or ipecacuanha, and, after some interval, a mercurial purge, made up with another purgative.'—' *Perhaps* the mercurial preparations may be found useful in ophthalmia membranarum. The ung. hydrargyri *is reported* to have been of service in ophthalmia tarsi. In phrenitis, mercurial purgatives may, *perhaps*, claim a preference to all others, when cathartics are indicated. *It is not improbable*, but the preparations of mercury may be tried with safety and advantage in enteritis, and *perhaps* in gastritis. Indeed, mercury may *perhaps* be ventured on in all the phlegmasiæ,' &c.—And we cannot help noticing the laudable care of the author, lest we should suspect he had a solid reason for his proposed administration of mercury, when its effects are unsupported by other authorities; for, under the head diabetes, we find ' from the diuretic effects of mercury, it is very probable it never was employed in this complaint; but from the effects of mercury in converting morbid secretion and excretion, it may be worth while to try its effects here. *This, however, is mere conjecture.*'

These will suffice as a specimen of the author's own part of the performance, both in style and matter; and our readers would certainly not thank us for a detail of facts, which it would be an insult to suppose they were unacquainted with.

ART. XIX. *The Physician's Vade Mecum: containing the Symptoms, Causes, Diagnosis, Prognosis, and Treatment of Diseases. Accompanied by a select Collection of Formulæ, and a Glossary of Terms.* By Robert Hooper, M. D., Licentiate in Physic, of the University of Oxford, and the Royal College of Physicians of London. 12mo. pp. 267. Murray.

WE were somewhat surprised, that, amidst the hurry of extensive practice, Dr. Hooper should still find leisure to compile elementary works. The method, however, which he has adopted in the present publication, demands little labour, and

less talents, for the chief part of the work is abridged from the well-known 'First Lines' of Cullen. The author professes to follow, with one exception, the order of the Cullenian nosology; and he has even, in many instances, availed himself of the terms.

The formulæ in general are well selected, and sufficiently varied. Students of medicine, and practitioners who have not the command of many books, will therefore find this work very useful.

ART. XX. *An Improvement in the Mode of administering the Vapour Bath, and in the Apparatus connected with it; with Plans of fixed and portable Baths for Hospitals and Private Houses, and some practical Suggestions on the Efficacy of Vapour, in application to various Diseases of the Human Frame, and as may be beneficial to the Veterinary Branch of Medicine. The whole Illustrated by Eleven Plates.* 4to. pp. 22, exclusive of the Explanation of the Plates. Booth.

ART. XXI. *Essay on Warm and Vapour Baths: with Hints for a new Mode of applying Heat and Cold, for the Cure of Disease, and the Preservation of Health. Illustrated by Cases. With an Appendix, containing Observations on Scrophula, and on Pulmonic Complaints, with Cases treated by the Vapour Bath.* By Edward Kentish, M. D., Physician to the Bristol Dispensary. Second Edition. 8vo. pp. 178. Mawman.

EVERY practitioner, who has paid any attention to the operation of heat and moisture on the animal economy, must have had frequent occasion to lament the difficulty of resorting to it, as a remedy, in consequence of the paucity of establishments for warm bathing in this country. A very small proportion, not merely of the population, but even of professional men, have had personal experience of its effects: hence, the general knowledge on the subject is extremely

scanty, and the popular notions respecting it are very erroneous. Warm bathing is deemed a 'relaxing' and 'enervating' practice, calculated only to gratify the effeminate voluptuaries of eastern countries; and adverse to the hardihood of the British character, and incompatible with the mutability and rigour of the British climate,—at once weakening the physical strength, and rendering the body more obnoxious to the injuries occasioned by cold. We are persuaded, however, that these are prejudices, which have no other foundation than hypothetical views of the operation of heat and moisture on the living body, chiefly deduced from their effects upon dead matter, or perhaps from the occasional abuse of the warm bath: and we are equally convinced of the great efficacy of warm bathing, in relieving many morbid conditions of the human body, as well as of its total freedom from those hazardous consequences, which are usually apprehended from its use. We were, therefore, gratified to observe the attention of the profession and the public strongly called to this subject by the two essays before us, and especially by the former; which, being the production of a gentleman of independence, the Honourable Basil Cochrane, can only be attributed to motives of generous and disinterested benevolence, and to a desire of extending to others the benefits which the writer has personally experienced from the practice.

We cannot, however, speak in terms of commendation of the manner in which Dr. Kentish has manufactured his volume: we say *manufactured;* for truly the labour of head, which has been exerted in its production, is of very small account. The general observations on the subject of warm and vapour baths, are divided into six chapters, and occupy 84 pages: the rest of the volume being made up of the histories of cases, illustrative of the effects of the vapour baths; and of an appendix, containing additional cases, and some remarks on scrofula and pulmonary diseases.

In a short introductory chapter we are informed, that Dr. Kentish formerly possessed an establishment of hot, cold, and vapour baths, at Newcastle, and that he has now com-

pleted a similar establishment at Bristol, whither he has removed. In order to convince us, that, 'in noting the effects of heat, he does not mean to deny or depreciate the value of the effects of cold,' he presents us with a brief rhapsody, which he calls 'reasoning;' *videlicet,*

'Nature herself delights in change—the seasons change, day and night, heat and cold, wet and dry, succeed each other; the human system constantly changes; there is an alternate contraction and expansion of the heart, activity and rest, hunger and satiety, follow in their turns. This train of *reasoning* might be carried much farther in physical causes, and would even *bear comparison* in elucidating many moral effects; but enough has been said to shew, that it would be wrong to have too great a bias towards the application of either heat or cold,' p. 3.

Chapter II. which professes to treat of 'baths in general,' consists of a considerable portion of the article BATHS, which is to be found in Dr. Rees's New Cyclopædia, and in which the construction and different apartments of the ancient baths of Rome are described. With the same liberal hand, Dr. Kentish has dispensed the compositions of Tooke and Savary, in Chapter III. (if, indeed, he has not taken the greater part of it from the same Cyclopædia, Art. BATHING, where, at least, the greater part of the same language is to be found,) as well as of Clavigero, in describing 'the vapour baths of different nations, more particularly as used by the Russians, Turks, and Indians.' As the works of these writers are in every one's hands, it were superfluous in us to repeat the sounds of the echo, or to be the retailers of a twice, nay, of a thrice told tale.

In the fourth chapter, the author begins to speak for himself: it relates to the 'Functions of the Skin,' but chiefly to the 'importance of applying heat and cold to the surface of the body, in Rheumatism and Gout.' p. 42. Only one of the functions of the skin, however, is here touched upon, namely, the perspiration, and that with a light and rapid hand. The skin, which 'is formed by the minute terminations of *all* the superficial and exhalant arteries, nerves, veins, and absorbents of the system,' is covered, we are told, 'by

the colouring, or *blushing* membrane!' Whence it is to be inferred, that the African is black only in consequence of a perpetual *blush*, which suffuses him à capite usque ad calcem! this is a function hitherto unassigned to the *rete mucosum*, the colouring matter of which, and the faculty of blushing, are exactly in the inverse proportion to each other. The principal view which Dr. Kentish takes of the function of perspiration, relates to the balance of this and of other functions, which he deems the great constituent of health; and, therefore, the cleanly, soft, and proper secreting condition of the skin, is considered as one of the most direct means of warding off disease, and of expelling it when present. The different forms of chronic rheumatism, the author asserts, (and his observation is corroborated by the experience of Dr. Bardsley, of Manchester,) have often yielded to the influence of the vapour bath, after they had resisted all the ordinary resources of the practitioner. His remarks on the external treatment of gout, which appear to be hypothetical, and not the result of experiment, lead to no satisfactory conclusions.

Treating of 'the effects of heat on the living system,' in Chapter VI. Dr. Kentish infers, from a contrasted view of the torpor occasioned by cold, with the increase of sensibility and activity produced by heat, that cold is, in all cases, a sedative, and heat a stimulus, to the animal body; which, in fact, almost amounts to an identical proposition. Heat is, obviously, the great stimulus of life throughout all nature, and the abstraction of it is necessarily productive of the opposite effect: nevertheless, as Dr. Currie has well pointed out, the *sudden* abstraction of it, inasmuch as it excites a powerful impression on the sensorium, is stimulant, and rouses the dormant action of the heart, (in syncope, for instance,) as quickly as any other stimulus. But this by the way. A doubt cannot be entertained for a moment, that the continued application and abstraction of heat increases and diminishes the actions of the living body respectively: and upon this principle, independently of a host of direct experiments in confirmation, it were easy to shew the nature of the influ-

ence of heat and cold, and the error of the popular views of the subject.

The doctrine of excitement, and of the two species of debility, (which, so far as it relates to the operation of stimulants on the living system, is a correct generalization of facts,) is well illustrated by the effects of the stimulus of heat. The temporary abstraction of heat, as in the cold bath, is soon followed by an augmented action of the system; the continued and excessive abstraction of it, is succeeded by loss of sensibility, of strength, and, if the continuance or degree of abstraction be sufficient, of life itself. On the other hand, a moderate increase of the stimulus of heat, applied for a short time, like a moderate excitement by wine, occasions an augmentation of the animal powers; and it is only when applied in excess, or continued too long, that indirect debility ensues. Now, it would appear evident, *à priori*, that, in proportion as the temperature of the body had been augmented, short of the production of this indirect debility, the application of cold; *i. e.* correctly speaking, the abstraction of a portion of its heat, must be safe; partly, because there is then a superabundance present; and partly, because while the strength remains entire, and even greater than usual, the process of evolving heat in the system is carried on in an unusual degree. Hence Dr. Currie concluded, that 'before profuse perspiration has *dissipated the heat*, and fatigue *debilitated the living power*,' the cold bath is perfectly safe and refreshing; and from a variety of facts he also inferred, that, 'in proportion as the body is heated, from whatever cause,' (with the provisions just mentioned, and that no local disease has occurred,) 'in the same proportion is the safety with which cold may be applied.' This, however, is not to be understood in an unqualified manner. If the cold be applied, until the heat of the body be reduced below the natural standard, and after the heart and arteries have subsided into their usual state of action, the farther abstraction of caloric becomes hazardous. The mischief, which arises from exposure to cold, after being heated, is occasioned not by the presence of excessive heat; but from the circumstance of having

become *cool, after* the excess of heat. The experiments of Sir Charles Blagden, Dr. Fordyce, &c., in a room heated to upwards of 200°, which were repeated by Dr. Dobson and others at Liverpool,—the constant practice of the Russians, of passing from a hot bath to roll naked in the snow,—the habit of the Romans of pouring cold water over the body, immediately on emerging from the hot bath, &c.—all prove the correctness of the principles above stated. The first mentioned gentlemen ' passed out of the heated room, after every experiment, immediately into the cold air, without any precaution;' and after exposing their naked bodies to the great heat, and sweating violently, ' we instantly went into a cold room,' says Sir C. Blagden, ' and staid there even some minutes before we began to dress, yet no one received the least injury.'* And Mr. Park assured Dr. Currie, that, in repeating those experiments at Liverpool, ' after remaining some time in the stove, where the heat was as high as 202°, he went into the external air without a great coat, or any other than his usual clothing, *during a hard frost*, and perceived neither injury nor inconvenience.'†

In combating the general apprehension of ' catching cold,' after the use of the warm bath, Dr. Kentish justly observes, that if the skin is rubbed dry, and the absurd custom of going to bed, and sweating, be avoided, ' we are less liable to partial torpor, or cold in any part, after warm bathing, than at any other time,'—and that ' after thus using a warm bath *we are the least sensible to the impression of cold.*' p. 84. That this is the fact, we know from personal experience; having frequently gone to the warm bath, chilled by the influence of the external atmosphere, in the winter, and returned from bathing, with a sensation of general warmth, which the cold air was unable to diminish. This is farther confirmed by the testimony of Count Rumford, whom Dr. Kentish has quoted. ' So far from feeling *chilly*,' says that active philosopher, ' or being particularly sensible to cold, on coming

* Philosoph. Transactions, Vol. LXV.

† Currie's Medical Reports on Water, &c. p. 124, 2d edit.

out of the bath, I always found myself *less sensible to cold* after bathing, than before. I even observed, repeatedly and invariably, that the glow of health, and pleasing flow of spirits, which resulted from the full and free circulation of the blood, which (warm) bathing had brought on, continued for many hours; and never was followed by any thing like that distressing languor, which always succeeds to an artificial increase of circulation, and momentary flow of spirits, which are produced by stimulating medicines.' (Essay on Warm Bathing.)

We have dwelt particularly upon this point, with the hope of contributing to the removal of a popular prejudice, which opposes the use of an important agent in the prevention and removal of disease. In conclusion, we may appeal, in corroboration of the principle above stated, to persons of sedentary habits, who possess but a moderate vigour of constitution, whether they have not marked the different effect of external cold upon their frame, when they have gone into the air, chilled already by a cold apartment and want of muscular exertion; or, on the other hand, with a general warmth, and an active state of cutaneous circulation. In the former case, the chilliness continues for a considerable time, and is with difficulty overcome by active and continued exercise: in the latter, the impression of the external cold is not perceptible, or is soon overcome by the glow, which moderate exercise brings forth.

After describing the structure and uses of the ancient baths, Dr. Kentish has observed, that the Romans employed the Piscina, or warm swimming bath, 'with a view of keeping up their health, strength, and courage.' But he adds,

'The moderns seem, until lately, to have had a very different opinion with regard to warm bathing: it has been generally regarded as relaxing, weakening, and enervating; and this opinion has descended from the physician to the people, so as to be regarded as an axiom. Marteau, Maret, and Macquart, with a host of continental *names* [writers], have looked upon this as a settled point, and have reasoned accordingly. But surely the opinion of the Greeks and Romans, from their extensive and national use of warm or tepid baths, should claim some attention on what they are so capable of forming a judgment

upon.'—' The allegories of the ancients agree perfectly with their extensive use of the warm bath: the warm springs were dedicated to Apollo; and so far were they from being esteemed debilitating, that some of them were dedicated to Hercules, the god of strength. Suidas, Eustatius, and other ancient writers, make use of the term *balnea Herculea*, as synonimous with warm baths: not one cold bath was dedicated to Hercules; but he is said to have found a natural warm spring, whither he used to retire, with the view of recruiting his exhausted strength after any great exertion, from whence he arose a giant refreshed. There existed an altar dedicated to Hercules at the baths of Thermopylæ; also in some Sicilian coins this demigod is represented in the act of bathing. Could we forget our prejudices, we should cease to regard warm baths as debilitating: for a great and polished people would not have been so absurd as to have dedicated to the god of strength, that which they thought possessed an opposite *effect* (quality).' p. 20.

This may be deemed a corroboration of the fact, that the moderate application of the stimulus of heat increases the strength; but the more direct testimony of the author's experience would have been more satisfactory. The universality of the use of the hot or vapour bath, among the hardy inhabitants of Russia, is a farther proof of its tonic qualities: and we could mention several instances of the benefit, which has been derived from the warm bath, in respect to increase of strength, as well as our own personal experience of it. Where it has occasioned debility, the great heat, the inordinate length of time during which the persons have remained in the bath, the frequency of repetition, the encouragement of much sweating after it, or some other abuse of the practice, is probably to be considered as the cause of this result. The Romans, under the Emperors, began to use baths of great heat, and some of them are said to have used the bath seven or eight times a day: a practice which, like all other excessive use of stimulation, must necessarily exhaust the powers of the constitution. ' From 12 to 20 minutes is, in general,' says Mr. Russell, ' the time recommended for immersion, at the commencement of a course of warm bathing, with a temperature of water varying from 90

to 100 degrees of Fahrenheit's thermometer, according to the feelings of the patient.' Used in this manner, the warm bath will be found to give strength to the infirm; and both the temperature and the period of immersion may be afterwards increased with impunity.

The effects of the vapour bath are, on the whole, the same as those of the warm water bath; but Dr. Kentish thinks that it possesses greater efficacy in those cases where a free perspiration is desirable, as in cases of chronic rheumatism, and other deep-seated pains, since it does not render the patient hot and restless, which the denser medium is apt to do. It induces perspiration at a lower temperature, and more freely than the water bath: 'the vapour bath needs not be heated above 96 degrees, to produce a salutary perspiration; whereas a warm water bath seldom produces the discharge at a lower temperature than 100°, and from that it is used up to 112°, in some of the hot springs at Bath.'—The vapour bath is likewise represented as a more effectual and agreeable detersive, or cleanser of the skin, and as of the greatest utility in all cutaneous eruptions. Two other advantages over the water bath are also stated; namely, the greater facility with which it may be applied to particular parts of the body, and its application, by inhalation, to the whole internal surface of the lungs. p. 67.

The cases related by Dr. Kentish, in his appendix, are chiefly histories of pulmonic disease, (viz. asthma, incipient phthisis, and chronic catarrh,) and of the various forms of scrofula; with some examples of rheumatism and of cutaneous disease. Scrofula is obviously much connected with the cold and humidity of our climate. Mr. Pearson, who superintended the establishment for the African boys, brought over for education by the Sierra Leone Company, states, that they all died of consumption. He says, 'it is remarkable that boys, brought from tropical climates, from the age of 8 to 12, almost uniformly become *scrophulous*' (scrofulous, Mr. P. would write). 'They bear the first winter tolerably well, but droop during the second, and the third generally proves fatal to them.' Sometimes the consumption was pre-

ceded by swelling and suppuration of the glands, enlargement of the bones, &c.; but, in the females particularly, the consumption was often the primary complaint. These fatal effects of the climate rendered it necessary to abandon the plan. Dr. Kentish justly considers the delusive attempts to harden children, born in this climate, by thin clothing, &c. as analogous to the change in the African children; and is of opinion, that the perfect and healthy evolution of the system is thus prevented, and that the foundation is laid for scrofula, consumption, and other chronic diseases. The vapour bath has been found extremely beneficial under all these circumstances. We shall transcribe the first case, in the appendix, in illustration.

'Case of Chronic Catarrh, from the change of a warm to a colder climate. Master P---, a young gentleman from the island of Jamaica, aged 11, has been in England three years for his education. The first winter he was much subject to coughs and colds, which did not leave him until the summer advanced, although he had every medical attention; the second year his complaints were more severe, nor did they leave him so perfectly as in the preceding year. He never seemed perfectly well; his growth was checked; and he carried the appearance of an animal which had been starved with cold, and ill fed. Very early in the third autumn, his former complaints were aggravated, his winter cough returned, and the defluxion from the chest was very great: to have looked at him, you would have taken him for a little old man; his surface was dry and shrivelled, notwithstanding he wore flannel next his skin. He had, during the former winters, gone through the whole series of means, which similar complaints yield to, in children of a healthier class. In the first inflammatory attack, antimonials, with demulcents, occasional emetics, anodynes, and squills, were administered, but nothing relieved him except the approach of summer. His expectoration was much tinged with blood; he was hot and feverish after eating, with a quickened circulation: so that there was every appearance of this local distress of the chest being likely to undermine the constitution, by forming hectic fever. It was then only October; the poor little fellow had therefore a melancholy prospect, if he were not to get relief until the following spring, or rather summer. Having myself seen the result of former means to relieve him, I was induced to add the vapour-bath to the other reme-

dies employed: for the first three or four times of its use, a great quantity of dry scurfy indurated cuticle was thrown off; by the time he had used it once a day for a week, this ceased; and the bath being used of a moderate heat, the natural secretion of the skin was restored. It is astonishing with what rapidity he recovered by these means; his expectoration gradually ceased; his appetite and spirits improved; in short, he seemed to be new created; both his body and mind acquired increased vigour:—by continuing its use occasionally, he was perfectly recovered. Instead of making him tender, it, on the contrary, by restoring equal action, gave him such vigour as enabled him to bear the winter's cold, and participate in the out-door amusements of his school-fellows; of which his former state of health rendered him incapable.' p. 85, et seq.

The practical importance of the subject might justify us in extending this long article still farther: but we trust, that we have said sufficient to call the attention of the reader to the remedy in question. We cannot, however, award any praise to Dr. Kentish, for the composition of his volume; for, besides the liberal use which he has made of the writings of others, as before stated, there is great incorrectness of phraseology in numerous places. The quotations, which we have made, are not free from such blemishes; but other passages, still more incorrect, might be adduced. In some of the histories, near the conclusion of the book, he has mentioned a 'medicated' vapour-bath, as having been employed with success. Now, it may be collected by implication, from what is said in another part of the volume, that the vapour was impregnated with the essential oil of mint, or some aromatic vegetable. It is impossible that Dr. K. can believe, that the vapour-bath acquires any additional efficacy by such impregnation; and the indefinite mention of a 'medicated' bath savours so much of the *ad captandum* style, in which 'more is meant than meets the ear;' that, for the author's credit, we could wish it had been omitted.

Of Mr. Cochrane's work we can make no analysis, as the principal part of it would be unintelligible, without the assistance of the plates, which represent the structure of the whole of the apparatus and utensils, required for the vapour-

bath; first, such as may be employed for a hospital, and has actually been constructed in the Middlesex Hospital; secondly, such as may be used in a private house; and, lastly, a portable vapour-bath, with its appendages, and the apparatus for applying steam locally to any diseased part of the body. These plates are followed by most minute estimates of every article requisite to complete the whole apparatus, under these different circumstances.

The Hon. gentleman was led to the contrivance and use of the vapour-bath in the following way:

'A very protracted residence in India,' he says, 'had considerably deranged my constitution, and I began to feel the painful consequences. My chest was loaded with phlegm: I laboured under a severe, and almost incessant cough; and my voice, which was feeble and interrupted, sometimes failed me. Accident about this time threw in my way "Mudge's *Inhaler*," and I made use of it with something of a prophetic assurance that it would lead to salutary results: and my success was equal, at least, to my expectation. This naturally produced reflection on the superior advantages that might be obtained from vapour, upon an extensive scale, and with a more general application.' &c.—'I was of course the first to try the efficacy of the vapour I had thus learnt to control; and such were the balmy effects it produced on my constitution, that they appeared to me the operation of magic. I expectorated with ease, and very copiously: the stricture on my chest was removed; I breathed freely; my cough left me; and my whole frame acquired new health and vigour.' p. 2.

Mr. Cochrane, however, with the utmost liberality, has allowed the use of his bath, and the attendance of his servants, to any one, we believe, who has been desirous of obtaining that benefit. And, though disclaiming all medical science, he states, that he has seen 'inveterate catarrhs, chronic rheumatisms, contraction of the muscles, and stiff joints,' yield to the influence of the vapour. Two cases of gout appeared to be cured by it; and small calculi were passed, without any of the agony which the patient had undergone, before the bath was resorted to. Tooth-ache 'has been dissipated by it in a few minutes.'

We cannot but consider the public as much indebted to Mr. Cochrane's zeal and philanthropy: and this publication is the more valuable, since Dr. Kentish, for reasons best known to himself, had not given us the slightest intimation of the mechanical means employed by him in the administration of the vapour: and as he has also withheld all minute directions as to its use, we shall add to this article, by quoting the observations of Mr. Cochrane upon this head. After stating that the morning has appeared the most proper period of using the bath, since, after repletion, the patients have complained of more heat and languor than at other times; Mr. C. says,

'In the early stage of the experiment, it was usual to allow the patient to remain in the bath from 15 to 30 minutes; but, better advised by my medical friends, this practice was discontinued, and from 5 to 10 minutes were deemed sufficient, as a profuse perspiration is induced in the course of 3 minutes. Carrying that advice further, the degree of heat was reduced from 130 to 110 or 120 degrees, and communicated not gradually, as formerly, but by shocks; varying this mode, however, according to circumstances, and the particular situation of the patient. The same friends assisted me in rectifying another error. Instead of allowing the patient to continue in bed two or three hours after bathing, closely covered up, and taking warm liquors to encourage perspiration, he remained there only a quarter of an hour, and then lightly covered; and, since reading Dr. Kentish's essay, he has been rubbed dry, and suffered to go almost immediately into the fresh air: unless the weakened state of his frame, from violence of indisposition, has rendered an indulgence necessary: or in cases that required friction, and in those cases my servants perform that operation according to the mode adopted in India, there called '*shampoing*,' &c. p. 5.

The more the practice is known, we are persuaded that this supposed necessary indulgence will be found less advisable. This tract is concluded with a brief relation of twelve cases, in which the vapour was eminently serviceable; and with a letter from Dr. Hart Myers, who himself received great benefit from its use, and who speaks in high terms of commendation of the bath. There is also a certificate of

approbation, at the beginning of the volume, signed by seventy-six physicians and surgeons, including the most eminent professional men in the metropolis.

Art. XXII. *A Treatise on Medical Police, and on Diet, Regimen, &c. In which the permanent and regularly recurring Causes of Disease in general, and those of Edinburgh and London in particular, are described: with a general Plan of Medical Police to obviate them, and a particular one adapted to the local Circumstances of these Cities.* In 2 Vols. By John Roberton, M. D. &c. 8vo. pp. 636. Bryce and Co. Edinburgh. Murray, London.

The object of Medical Police is to lay down rules for regulating the health of man, and for procuring him the greatest possible share of enjoyment. To effect this, we must discover the sources of disease, by investigating the effects of the various agents in nature upon the human constitution. Such an inquiry is consequently of vast extent, and cannot be pursued in a scientific manner without an intimate acquaintance with the powers and capacities of our species. The aspect and habits of society in every climate, and in every situation, and the varieties of moral and physical qualities, observable in the different stages of civilization, must be considered, before we can estimate the extent to which our resources may be carried, in executing plans to counteract or soften the numberless ills by which our health and our comforts are assailed: in short, few pursuits require more diversified knowledge, or a more enlarged acquaintance both with the philosophy of man and of the universe.——Medical Police, therefore, presents considerable difficulties to the inquirer, and, as our author justly remarks, 'has rarely been made the subject of a distinct inquiry, except by men, who, from their complete unacquaintance with medical science, have either treated it in an imperfect manner, or enveloped it in such doubt, by evident contradictions, as to render an obedience to their rules impossible, unless human health and comfort, the great ob-

jects of such an inquiry, were to be considered only in a very remote point of view.' Introd. p. i.

The volumes before us are not to be tried by the rules, which generally apply to works that are purely medical. The author has boldly decided upon some of the most difficult questions of political economy; and, not contented with delivering many unqualified and erroneous opinions respecting the sources of wretchedness and disease, has recommended schemes to the legislature for banishing poverty and its concomitants from the land! He evidently entertains the highest veneration for the powers, which he seems to think are vested in that august body, and attributes to its enactments a degree of influence, which they never can possess. It has been truly said, that 'omnis vita servitium est;' our author, however, presents us with a picture, which would appear to warrant a much more unfavourable description of our condition. The introduction exhibits 'those miseries of mankind which the work is intended to obviate,' and sketches 'the plan to be adopted for that purpose.' It is a curious piece of composition, a sort of medical romance, interspersed with scraps of poetry, and glowing with benevolence and philanthropy,—pointing out the awful misery and mortality of the human race, the transitory nature of life and health,—shewing that the want of the latter makes the '*rich man poor indeed, the tyrant tame, the ambitious humble,*'—that 'vice, vexation, and disease, are engendered and fomented' among the needy and profligate,—and that terror indescribable arises to the sick poor from the 'shocking view of each others' sufferings, their agonies, their ravings, or their dying groans, in the large wards of a crowded hospital,' &c. One quotation reminds us, that life is 'but a walking shadow; a poor player,' &c.; and the next presents us with that beautiful description of Cuvier's, beginning with, 'A female in the prime of youth and health.—That elegant voluptuous form,' &c. But, while expatiating on the luxuries, or bewailing the miseries of his fellow creatures, the author charitably stops to heave a sigh over the evils, which peculiarly bear upon the junior branches of his own profession. He laments, with singular

fervour, the hard fate of the young and ingenuous physician, who is forced to contend against the craft and the malevolence of his elder brethren; 'whose vanity is piqued, in having opinions, which they thought perfectly established, brought into question, and exposed by a young man; and their interest is evidently concerned to crush him as soon as possible.' Introd. p. xxxviii. After many wordy pages, and many fearful accounts of our fallen nature, and most minute and disgusting details of human wretchedness, we arrive at the plan of the work, which, as Dr. Roberton states, 'is not designed as a systematic treatise on diseases; the reader must not, therefore, expect to find a minute and prolix detail of their nature, symptoms, and methods of cure: my purpose is rather to point out and describe the nature of the permanent and regularly recurring causes of disease, and the modes of obviating them.' p. xliv. With the latter intention, the author vehemently assaults the passions of his readers, and endeavours, by the most pathetic lamentations, to draw their attention to his great and original plan.

'We boast,' says he, 'of the independence, the liberty, and the freedom, which we are so justly proud of in Great Britain,' while we permit a slavery to exist in almost every part of our island, more galling in its nature, and more destructive in its consequences, than the chains of the most despotic tyrant. We constantly allow thousands to exist in the most loathsome cells, slowly, but surely destroyed by those *withering diseases*, which are propagated *with themselves*, and suffered to exist; while matters, perhaps no way to be compared to them in importance, are occupying the public mind.'

To banish this slavery, Dr. Roberton exerts the whole strength of his eloquence. But, while he modestly admits that many of his opinions 'must long have been familiar to every one,' he laments that, so far as he is acquainted with the writings of former times, 'no author has been fortunate enough, either from incorrect statements of facts, or from deficient modes of reasoning, to induce the Legislative body of this country to adopt a general systematic plan for their prevention.' p. xlvi. As from this statement we infer, that Dr. Roberton entertains hopes that he is the fortunate indi-

vidual, who is to bless his country with such incalculable benefits, by influencing the '*Legislative body*' to adopt his '*general systematic plan,*' it is necessary that we should inform our readers of some of the admirable benefits that are likely to result from his exertions.

In the first place, then, we learn the following consolatory facts, that most of the miseries which attack us, whether in the shape of disease, poverty, &c. arise from human folly, and may be remedied by human means. With this view, the external and *removable* causes of disease are to be attended to; our bogs and swamps are to be drained; '*that uncleanness and filth, which in every part of our island obtrudes itself upon our notice,*' (Vol. I. p. 46,) is to be removed; 'the local situation and structure of dwelling-houses,' (p. 47,) are to be under particular regulations; all the wretched abodes of misery are to be abandoned by *general consent*; 'or, *rather, a law ought to exist, preventing all such places from being inhabited.*' (Vol. I. p. 127.)

These particulars form some of the principal features in the author's plan. Nothing, however, we presume, will be finally determined upon respecting that prolific source of disease, the atmosphere, till meteorological science has made some further advances. On this subject, however, we are left in doubt; for we are told, that, 'whatever diseases are found to arise from' any general cause,—any derangement of *natural objects,* 'may, even in the present imperfect state of physics, though with difficulty, be wholly, or for the most part, removed.' Introd. p. xlvii.

From these and other similar passages, therefore, we conclude, that an application is to be made to Parliament for leave to bring in a Bill, to promote means for obviating the 'general and *removable* causes of disease.' This part of it must rest upon an extensive basis of topographical and meteorological observations, accompanied with architectural designs for cottages and towns, which are to be clean and thoroughly 'perflated.' The other part of it refers to the inhabitants themselves, who are to undergo a speedy and happy transformation. It is to be enacted that they shall

henceforth quit their '*cellars*' and other '*noisome*' habitations;—that their dwellings are to be open to the examination of *inspectors,* who are to take cognisance of every thing that relates to health and cleanliness; and that drunkenness, debaucheries, and all manner of irregularities, shall cease.

To devise means for bettering the condition of the poor, has always been looked upon as a subject of the greatest difficulty. It is ridiculous to tell us, that we have only to improve the construction of their houses, and to change the manners of those who inhabit them, in order to remove the sources of their poverty, and of many of their diseases. The causes productive of poverty and wretchedness lie much deeper; and whilst they continue to act in full force, the effect must of necessity follow. Does Dr. Roberton really think, that poverty, vice, ignorance, and disease, can be made to fly before a legislative enactment? What, though our Commons-house of Parliament, in the plenitude of its wisdom and power, were to enact, that, from this time forth, no subject in these realms shall inhabit a house, that has not a free exposure to air and light; that its walls shall be dry and comfortable; that it shall be clean, and well ventilated; that no nuisances prejudicial to health shall be suffered to exist near it; that its inhabitants shall lay aside their filth, their rags, and their debaucheries, and assume habits of cleanliness, order, and decorum. No government can grant boons of this kind; and such decrees would be worse than useless. When poverty, disease, and profligacy, keep the multitude in that miserable state, and arrest all attempts at bettering their condition, the assistance to be given must be rendered in a very different manner. For our own parts, we should be exceedingly sorry, if it were in the power of one part of the community to will, that another part of it should be in health or in sickness, in riches or in poverty. A power of this kind would, indeed, lead to a despotism of the most malignant character; and the slavery, which must follow, would be of a much worse species than that described by our author. Omnipotent, however, as edicts and acts of parliament are conceived to be, the character, happiness, and

health of a nation, are fortunately not always under their control; and if we wish to expel vice and disease from the houses of the poor, we certainly must not rely upon such mandates. Man must be taught to purchase the comforts and enjoyments of this life by his own exertions; and to be enabled to appreciate the advantages of knowledge and good conduct, he must respect himself, and feel that he is of some consequence in the social scale. All public charitable schemes of institutions, of every description, when they are inconsistent with principles of this kind, defeat the purposes of those who promote them, and increase the evil they were intended to remove.

On the whole, we are convinced, that our author has formed a most erroneous estimate of the power of medical police, or any other sort of police, in removing the miseries which he has described. There are many leading questions, connected with all inquiries of this kind, which he evidently has not been in the habit of examining. It may be true, that many of our race are exposed to the influence of most 'horrible masses of putrefying substances;' (p. 56;)—that 'large families are packed together within their own stinking clothes, and foul linen, sufficient to suffocate all who approach them;' (p. 124;)—that 'gross filth,' 'stenches,' and 'putrid exhalations' from 'huge masses of putrefaction,' may constantly assail them;—that many wretches preserve the 'shocking custom' of 'living in cellars infected with vermin of various kinds;'—that the father of a family 'lies *absorbed* in his own fetid and contagious perspiration, till he either dies, or accidentally recovers.' (Introd. p. xxiii.) 'Probably some squalid daughter of poverty, careless of life, may administer the produce of rags in pawn;—possibly some friend of humanity, *absorbed* in pity, and defying danger, may pour out the antidote while he inhales the poison.' p. 25.

Although we cannot easily discover how the various species of *absorption* are to take place, all this, nevertheless, may be true. We know, however, that this description does not generally apply to the poorer inhabitants of this country.

We are aware, that much deplorable misery exists, but never ventured to believe, that it could be so completely swept away, till we met with the brilliant and interesting discovery of Dr. Roberton!

The general character of this work may be learned from what we have said. To do justice, however, to our author, it is necessary, that we should advance some other proofs, to confirm the accuracy of our decision.

The First Part of the book treats of the general causes of diseases. The first chapter refers to natural causes, and the first section to 'Soil.' The disquisition is opened with the following remarks:

'Although the derangements of climate have, perhaps, of all natural causes, the greatest influence in the production of disease; yet, as all the aeriform fluids, composing the atmosphere, as well as those which are often blended with it, are productions of the superficies of the earth, or of the various substances which exist upon it, it is soil evidently which demands our first attention. Indeed, it is only from such substances, that the component parts of the atmosphere can be obtained. We have proofs, therefore, that the atmosphere is entirely a production of the soil, and that when portions of it are vitiated, or otherwise rendered unfit to support animal and vegetable life, it is from this source alone, that the injury arises, and from this source only that it can possibly be repaired.' Vol. I. p. 2.

The second section is upon Climate, and includes a large collection of facts; most of which, however, are commonplace, and well known.

The value of Dr. Roberton's facts, also, is diminished, because he seldom cites his authorities; and as they are advanced to support particular opinions, our caution is the more necessary, especially when we observe, that almost all his observations and experiments are borrowed from other authors. We wish, for instance, that Dr. R. had stated, whence he obtained the following piece of information, contained in the 3d Section, under the head 'Situation.' Vol. I. p. 106.

'We know, that in some of the lowest, moistest, and closest parts of London, where effluvia, perhaps not greatly different from those emitted by marshes, are to be found among the poorer people, *spotted*

fevers and dysenteries are often to be met with; and these are seldom heard of among people of better rank, living in more airy situations. Hence the autumnal remittent has, by some, been called the *Westminster* fever; and many, (of course the author means 'the poorer people,') by their attendance on the houses of parliament, or the courts of law, in the *beginning* of the Sessions, when the houses were more damp than usual, have contracted malignant diseases.'

If Dr. R. affirms this of London, what are we to think of his accounts of India, of Persia, of Africa, of America, &c.? In many parts of Africa, for example, he informs us,

'The air is vitiated, *noisome*, and thick, insomuch, that lighted torches or candles burn dimly, and seem ready to be extinguished; even the human voice loses its natural tone. The smell of the ground and of the houses is raw and offensive; but the vapour arising from the putrid water in the ditches is much worse. All this, however, seems tolerable, compared to the *infinite* number of insects, swarming *every where*, both on the ground and in the air, which, as they seem to be *produced* and *cherished* by the *putrefaction* of the atmosphere, so they contribute greatly to increase its impurity.' Vol. I. p. 111.

Unluckily we are not told the name of these *putrefied* regions, nor that of the traveller who was so fortunate as to effect his escape from 'the wild bees from the woods,' '*the millions* of ants,' the swarms of cock-roaches, which extinguished the candles; the musquitoes, sand-flies, &c.

In the second chapter, the artificial causes of disease are considered. The first section treats of 'the importance of attention to the construction of houses; the quantity of air necessary for respiration; the state to which it is reduced in confined situations,' &c.

In the second section, occupations are considered; and we request the attention of our learned readers to the following admirable observations. p. 137.

'A pure, open, country air is very refreshing, facilitates respiration and the functions dependent upon it, confers strength, and enlivens the whole machine. But, instead of enjoying the benefit of it, literary men generally live in an atmosphere, which being seldom renewed, is dense, full of vapours, and inelastic: by this means, they are heated rather than refreshed, become heavy, instead of being animated, and

are more relaxed than strengthened: besides, this air, instead of promoting, obstructs perspiration, and thereby increases the bad effects proceeding from the other *causes* by which the learned are surrounded. Not to renew the air of *one's* room, is absolutely to live in the impurities of the preceding day.'

In the same dull strain, the author continues his narration, and informs us, that, by a little attention, these evils might be avoided; comments pathetically upon the 'inexcusable error' 'of studying all the night;' expatiates on the danger which results from 'the oily vapours arising from the candles,' but comforts us with the intelligence, that, 'if we burn wax, the danger, indeed, is not so great; but it still subsists to a certain degree.' The section concludes with remarks on the 'bad effects arising from occupations in which heat is employed,'—'bad effects arising from working in metals,' 'from draining,' 'from tanning,' &c. from all which the author discovers, that the ties of life 'are of the most delicate and perishable nature;' in the changes that are constantly working, he sees 'the attributes of that Deity to whom they owe their origin,' and concludes with some choice poetry, signifying, that

> 'Time shakes the stable tyranny of thrones,
> And tottering empires crush by their own weight.'

'Modes of living' form the subject of the next section; and common-place remarks, which might have been tolerable from our grandmothers, are doled forth with unceasing whine. The *uninterrupted* health of the cottager, his '*amazing* length of life,' his sleep, 'equally undisturbed by the corroding cares of the affluent, and by the unmeaning bustle of the gay and the dissipated,' are contrasted with the diseases and the miseries of the intemperate and the luxurious. The common rant against the use of Tea is duly urged. 'It relaxes the stomach, and weakens the energy of digestion.' But the author immediately qualifies this censure by observing, that 'it is in reality the warm water more than the tea that is injurious; wine, spirits, and beer, are condemned in the usual manner; although we learn, for our comfort,

that the author's own private experience is in favour of their *moderate* use.—' The effects of dirtiness' meet with due attention, at the close of the 4th section upon ' manners ;' and we must do Dr. Roberton the justice of stating, that, on this subject, he is quite at home.

After dwelling so long on the physical causes of disease, we turned with pleasure to the consideration ' of the operations and states of the mind ;' but we soon found ourselves mistaken in our anticipation, for we discovered only trivial remarks, and a meagre collection of facts, and the most undoubted truisms.

The second volume contains what the author terms ' police,' for the several causes which were enumerated in the first: thus we have ' police for natural causes,' ' police for artificial causes,' &c. Now, this said police, so frequently and pompously announced, consists of nothing more than the most common-place suggestions of common sense ; and, from the author's fondness for particulars, and abhorrence of generalizing, nearly the sum of the contents of the first volume is repeated in the second. The third section on ' police for situation,' opens with the following recommendations :

' We ought to make choice of a pure air, free from all pollution, and *far remote* from stinking places, for such air is most fit to preserve life, and to recreate the spirits ; whereas, on the contrary, a cloudy or misty air, and such as is infected with gross and stinking vapours, dulls the spirits, destroys the appetite, and is the cause of many diseases.' p. 13. ' Men of letters, among the many other inconveniences that they suffer, are often obliged to fix themselves in towns *for many reasons ;* they ought therefore to *pick out* as *wholesome* a lodging as possible; their rooms should be lofty, light, exposed to the wind in summer, and to the sun in winter ; and, above all, they should avoid living near places which emit any sort of unwholesome exhalations.' p. 14.

The section on ' police for modes of living,' is composed of choice and savoury materials, evincing the author's acquaintance with the usual articles of food.

Thus we learn, that ' the flesh of a good bullock is equal, if not superior, to any other ; and its fat is as easily digested as that of veal.

The tongue and the tripe are the most indigestible parts of this animal.' 'Veal is the young ox, it is very soluble. It ought not to be brought to market before it is, at least, six weeks old, and fed, if possible, by its mother's milk,' &c.

But we forbear, in compassion to the reader, to lengthen out this disgusting detail of silly, old woman's tattle, with which the *author* (if we may so call him) contrives to fill fifty pages, descanting on what he absurdly terms '*Police* for Manners,'—'*Police* for Dress,' &c. 'Propugnat nugis armatus;' he condescends to give us instructions respecting the uncleanliness of long nails on our toes, and the *political* dimensions of our stocking-feet! Nevertheless, he anticipates that vile and malignant critics will be excited to great rage, by his philosophical proposals for annihilating evil in the world, which (he predicts,) 'will, in many instances, meet with the most violent opposition; the severest strictures from *interested* and *angry parties* will, from selfish motives, or private malevolence toward the author, be secretly poured out against them, which those, who *make a trade of such vile practices*, well know have much effect on the world in general.' Vol. II. p. 360. But, we assure him, we are quite calm, and look upon him with 'a countenance more in sorrow, than in anger:' his book is sufficiently heavy to sink without any assistance from the critics. In truth, we feel compassion for all who are concerned in it. We pity the author, who has gone through so much labour in the production of two volumes, so large and so useless: we pity the publisher, whose shelves will long groan under their load: and we pity the unwary purchaser, who will discover himself to have gained possession of many absurd opinions and impracticable proposals, of mistaken representations of the nature and means of relief, of the common evils of society, and of the most obvious and uninteresting details, accumulated without order or discrimination. The preceding statements and quotations, we think, amply justify this character of the work, independently of numerous instances of bad grammar, and of coarse and uncultured style, which we have refrained from quoting.

ART. XXIII. *Reports on the Effects of a peculiar Regimen on Scirrhous Tumours and Cancerous Ulcers.* By William Lambe, M. D. Fellow of the Royal College of Physicians. 8vo. pp. 190. Mawman.

IT is in the practice of medicine, as in the ordinary affairs of life: we bestow our chief attention upon a few leading objects, and, in great measure, neglect those less obvious sources of good or evil, which are continually, though imperceptibly, operating. Thus, in chronic maladies, we are in the habit of prescribing a succession of active remedies; whilst the effects of a rigidly abstemious diet, and the abstraction of all stimuli, are too frequently disregarded. In these sentiments we perfectly coincide with the author before us.—In the present state of our knowledge, cancer is a disease over which the resources of our art have, confessedly, little control: it is with satisfaction, therefore, that we receive any publication, which may tend to elucidate its origin, or to mitigate its effects. Upon this principle, we have ventured to recommend a trial of Mr. Carmichael's mode of treatment:—we are here presented with another plan, widely different indeed in its nature, but, according to the author's statement, infinitely more certain in its beneficial results. It at first startled us a good deal to find the sentiments of Dr. Lambe, who it should appear is a scholar, and who quotes Greek in his title page, so directly at variance with our classical recollections:—Ἄριστον μεν ὕδωρ, triumphantly exclaims the Theban bard: κακιστον μεν ὕδωρ, is the motto of Dr. Lambe: we trust that the Bath Corporation, in the pride of Greek, and the plenitude of physic, will defend the Pindaric scrap, which they have blazoned over their pump-room, in letters of gold; and that Dr. Gibbes will vindicate the reputation of silex and hot water. But we proceed to lay before our readers the argument of Dr. Lambe's production.—In brief, then, the Doctor had, for a long time, regarded the water which we habitually use, as a principal

agent in the production of some diseases, which have at all times eluded the powers of medicine. Like a good citizen, he had told the world his suspicions; but the world regarded him not. Further experience and more mature reflection have strengthened his opinions; and he finds abundant reason for thinking, that water is the prime agent in the generation of cancer; and that the process, necessary for the prevention and eradication of that destructive malady, is the substitution of distilled water in the place of every other kind of liquid, and the strict adherence to a vegetable diet: though it appears, that the latter part of the regimen may be occasionally dispensed with.

This is the whole of the plan; which has, at least, simplicity to recommend it. To enforce it, very cogent arguments are adduced from the efficacy of the Malvern springs, and from the habits of the ages of primeval innocence; tending to prove, that mankind, for some thousands of years, have been subsisting upon very destructive and poisonous substances. But as it is not quite clear, how, under such circumstances, the race has continued to be propagated, we could have wished for some further information on this point. It would, doubtless, form a valuable addition to the history of inventions, to know by what means the venerable characters of holy writ contrived to prolong their existence to that comfortable duration to which it was extended. We find no traces of the process of distillation, yet Methuselah lived to be 965 years old: and Noah, though he drank wine, was 950 years of age when he died. Nay, it appears, that the patriarchs were so satisfied of the propriety, not only of drinking water, but of eating flesh, that Abraham is stated to have entertained his angelic visitants with veal, and butter, and milk: a repast to which, we apprehend, even a hungry alderman would not object in these degenerate days. In the eyes of Dr. Lambe, such a repast, however, would be an abomination: he unequivocally pronounces animal food to be 'in its effects analogous to narcotic poisons, only more permanent;'—milk he regards with great suspicion; and as to water, language seems deficient in terms to express his

dread and abhorrence of it. It is ' a poison which affects every fibre of the body : it is the direct and immediate agent in the production of cancer; and may fairly be suspected to be operative in the generation of all diseases attended with a solution of continuity.' p. 15.

While we are thus prohibited from quaffing the limpid spring, whose transparency and coolness invite but to destroy; while we are restricted from the indulgence of appetites, inconsistent with the primeval habits of our nature, and our anatomical structure; (for the Doctor has satisfied himself that we are herbivorous animals) we are allowed to revel without restraint in the luxury of raw vegetables, (he objects to their being dressed) and potations of *vapid* water. By adopting this diet, we are to be exempted not only from cancer, but from all diseases attended with solution of continuity. The distilled water is the true elixir of life: and by its use we may indulge the prospect of being translated, by some easy process, from this sublunary sphere to brighter worlds; for it is not clear how we are to be assailable by any mortal disease.

Dr. Lambe does not rely upon his arguments alone: he has adduced ten cases of cancer in support of his doctrine. 'Tis true, that among them we find nothing like a cure, or an approximation to a cure, of ulcerated carcinoma; but then the author tells us, that the remedy was either used too late; or, not used regularly; or, that its efficacy was counteracted by the improper habits of the patient. The great fact, which the Doctor considers as conclusive in favour of his plan, is, that a cancerous ulcer has been *kept from spreading* by the use of distilled water. (p. 42.) When a single fact is thus ostentatiously paraded, in solitary nakedness, the paucity of evidence must be lamentable indeed. From the first broaching of his hypothesis, to the date of the present publication, time enough has elapsed to have enabled the Doctor to collect more decisive evidence, if his treatment could have furnished any. We must therefore infer, either, that he has had no opportunity of trying it, which the cases contradict; or, that his experiments have been unsuccessful, which we are

inclined to believe. He evidently writes under a full conviction of the truth and the importance of the doctrine which he advocates: but, in the pursuit of a favourite idea, he has, like many other enthusiasts, deceived himself by indulging to excess in visionary speculations. We certainly are very far from thinking that distilled water will cure cancer; any more than that water will cause it: but at the same time we are convinced, that a thorough change in diet, a total abstraction of stimuli, will produce a great and beneficial alteration in many chronic diseases: thus far we will concede to Dr. Lambe; beyond this, we leave him to the reveries of his own imagination.—To the political economist, they may, perhaps, furnish important suggestions. The immense saving of provisions, which might be effected by the adoption of such a dietetic regimen, would rapidly augment the population of our islands. It would remove the great impediment to early marriages. The young peasant, who could lay in a tolerable stock of hips and haws for winter provender, would no longer feel doubtful about providing for a family: the only material expense to combat would be the purchase of a still. Mr. Malthus's prohibitions would become nugatory. Moral restraint would cease to be a bar to matrimony; and vice and misery would be expelled by parsnips and distilled water. This, though rather a griping diet for a baby, and not exactly fitted for its tender gums, would yet, without doubt, furnish a hardy and valiant progeny to the state; and the mothers, being restrained from suckling their children, would soon be in a condition to breed again. Thus might Dr. Lambe become a more formidable opponent to Buonaparte, than my Lord Douro, or even the magnanimous Earl of Chatham; and promote the recruiting service far more effectually, than all the fine plans of the sensitive Lord Castlereagh. What exploits, too, might be performed by an army no longer dependent on an ignorant and corrupt commissariat; no longer fettered in its movements by the necessity of taking up positions to defend its magazines. How charmingly, instead of being served with rations, might the troops be portioned out in turnip-fields, or sent by companies

to graze. On shipboard, indeed, the case would be more difficult: we should anticipate great obstacles to the primitive diet, not only from the tendency of the vegetable cargo to ferment and putrify, but from the inveterate prejudices of the seamen in favour of their accustomed *poisons*, and from their aversion to flat water and *sauer krout*. In this carnivorous and corrupt generation, we are indeed afraid that the simple plan of diet, recommended by Dr. Lambe, though traced to the ages of primeval purity, will meet with few followers: nor, in spite of the trembling humanity of Mr. J. F. Newton, do we augur the diminution of *murders* in the precincts of Newgate Street. Mankind are so hardened in prejudice, and steeled against conviction, that they will not believe, though Dr. Lambe should swear to them, that water is rank poison; that meat is a narcotic worse than opium; that milk is very suspicious; nor that distilled water will make them immortal, and—cure cancer.

In concluding this article, we beg to assure our readers, that we commenced the perusal of this work without any sentiments of hostility to the author, to whom we are not personally known. Our prejudice, if any, was in his favour, for we have heard him represented as a man of talents, integrity, and learning. We are perfectly convinced, also, that ridicule is not the test of truth; that 'les plaisanteries peuvent egayer, mais elles n'instruisent point.' But, when we found mere speculations substituted for proofs, and assertions unsupported by corroborative facts; when we found that the whole of the evidence in favour of the plan consisted of the partial relief afforded in one or two cases:—under these impressions, we felt the impracticability of seriously combating propositions so wild and eccentric, as are repeatedly advanced in the volume which we have just closed.

ART. XXIV. *An Essay on the Use of a regulated Temperature in Winter-Cough and Consumption: including a Comparison of the different Methods of producing such a Temperature in the Chambers of Invalids.* By Isaac Buxton, M. D. Physician to the London Hospital and to the Surry Dispensary. Small 8vo. pp. 176. Cox.

THE frequency and fatality of diseases of the respiratory organs have attracted to them a greater degree of attention, than has been bestowed on, perhaps, any other class of complaints; yet we have to lament, that our knowledge of them is still very imperfect, and that physicians are by no means agreed as to the essential characteristics of some of the most important of them. Insidious in their first attack, and often almost imperceptible in their progress, they are too frequently past remedy, before assistance is procured; and the difficulty of their cure, even when undertaken in the most favourable circumstances, is proverbial. It is here that the most experienced practitioners are too often condemned to remain the spectators of sufferings, which they may perchance alleviate, but which all the powers of their art are insufficient to remove. 'O quantum difficile est curare morbos pulmonum!' exclaims Baglivi, 'O quanto difficilius eosdem cognoscere, et de iis certum dare præsagium! Fallunt, vel peritissimos, ac ipsos medicinæ principes. Tyrones mei, cauti estote, et prudentes in iis curandis: nec facilem promittite curationem, ut nebulones faciunt, qui Hippocratem non legunt.'

To chronic disorders of the lungs these observations are peculiarly applicable. Being the most common of all diseases in this climate, and having of late years extended their ravages in a very alarming proportion,* as we have already had occasion to shew, it has become more desirable than ever, to discover some means of lessening their prevalence, and checking their extreme mortality. When the new

* See Ann. Med. Rev. Vol. I. p. 40, 337.

system of chemistry first came into vogue, it was fondly hoped, that we should be able to apply to this beneficial purpose, the knowledge which it furnished respecting the function of respiration; but, though the earlier attempts seemed to promise success, the delusion, alas! vanished very soon, and pneumatic medicine left us equally helpless as before. Afterwards, a specific for consumption was believed to have been found in the digitalis purpurea; but that remedy, too, has sunk in repute; and though it continues to be prescribed, is now regarded chiefly as an useful *narcotic*. The last method of cure is that which was proposed some years ago by Dr. Beddoes, and which forms the subject of the essay before us; viz. the maintenance of the patient in an equal temperature, either in a cow-house, or in a room heated by artificial means.

It is evident, that, in combating the diseases of the pulmonary system, we labour under many disadvantages. Over the stomach, and blood-vessels, and nerves, we possess immediate control; and we have it, at least, in our power to remove from them, and the other organs of the body, all external morbific causes: but upon the lungs the most active remedies act only indirectly; and the great exciting cause of their disorders is to be found in the vicissitudes of the atmosphere, to which they are continually exposed, and from a communication with which they cannot, without the utmost danger, be for any length of time excluded. The extreme delicacy of the membranes, with which they are lined, renders them liable to injury from the slightest causes, and augments the difficulty of restoring them, when once diseased, to a healthy state. In these membranes the principal chronic disorders of the lungs have their origin; and to them, accordingly, the chief remedies should be directed. With this view, physicians have been long in the habit of administering such medicines, as were supposed to exert a specific action on the parts in question, and by their demulcent, deobstruent, and expectorant power, to assist in altering and promoting the discharge of whatever morbid secretions might have taken place. But it may be doubted whether, with the

exception of caloric, there be any attenuant or incisive medicine that can arrive directly at the lungs. The utility of this agent, when conveyed in the form of vapour, in allaying cough, the precursor and attendant of most pulmonary diseases; and the benefits derived from a high temperature in phthisis, are familiar to every practitioner: it is only very lately, however, that the exhibition of it has been reduced to a regular system. The relief which consumptive patients experience on their removal from a cold to a warm climate, first suggested the idea of the succedaneum, to which we have already adverted. In those cases, where it has been tried, it has generally given much relief, though it has not always succeeded in establishing a cure. Of 12 consumptive patients, thus treated by Dr. Beddoes, 7 recovered; and several cases are detailed in the present volume, where the same method was employed with equal success. The following, which was communicated to the author by Dr. Jenner, we quote, on account of its brevity.

'Mrs. ——— was attacked, about fifteen years ago, at the commencement of winter, with an inflammatory affection of the lungs, which brought on a spitting of blood. This was followed by a train of symptoms which left but little room for me to doubt, that she was on the verge of pulmonary consumption. Having often, under similar diseases of the chest, in common with others of the profession, experienced the good effects of the removal of patients to a warmer climate, I saw no reason why we were not to hope for the like advantages from an atmosphere rendered temperate by art. This was tried, and with the most happy result. The temperature of her chambers was attentively regulated by a thermometer, which was not suffered to sink below 62° by night: and by day it was kept a few degrees higher. The winter was rigorous; and there was some difficulty, by means of common fire-places, in keeping up a more uniform degree of heat, especially by night. The cough, and all the hectic symptoms, gradually subsided. Mrs. ——— did not go out into the open air, till it became of an equal temperature with that which she had been breathing within doors: and, if I recollect right, this was not till the beginning of the ensuing month of May. But a considerable time before this she had regained her usual health. Since this period,

Mrs. ——— has found, in the course of some succeeding winters, the recurrence of the symptoms in a less violent degree; but their ill tendency has been uniformly checked by avoiding exposure to the cold air. The concise history of this case is so similar to others which have come under my observation, that it would be little more than a mere repetition to lay them before you.' p. 83—6.

The difficulty of preserving an uniform temperature, by means of common fire-places, of which Dr. Jenner complains, is completely obviated by the substitution of a stove, which, as the author of the essay has shewn, may be erected at a small expense, and the original cost of which will be more than counter-balanced by the saving of fuel. In one case, for example, attended by Dr. Buxton, a common ironing-stove was employed, and found to answer every purpose. The whole expense of purchase and fixture amounting only to between three and four pounds.

As there are no observations that possess any claims to originality, in Dr. Buxton's performance; and as it is written more for popular than for professional use; we deem it unnecessary to give any minute account of its contents. Though we cannot bestow great commendation upon the ability which it displays, there is certainly nothing in it which can be deemed discreditable to the author; and satisfied, as we are, of the propriety of adopting the plan which he recommends, in all cases where the circumstances of the patient will admit of the expense, we shall not quarrel with him for reminding the public of a mode of treatment, which they had before heard very satisfactorily discussed, or inquire very scrupulously into the motives to which we ought to ascribe the appearance of the present essay. We cannot, however, dismiss the book, without adverting to a most extraordinary objection that has been started against the method of cure which it recommends, by a writer in the Critical Review, for January 1810; viz. that 'it must be regarded as a sort of aristocratical remedy, to which only the sons of opulence can resort.' As well might the reviewer contend, that, though a rich man may have it in his power to live in a palace, and to enjoy all the comforts and luxuries of life,

yet, as all men cannot afford to live in palaces, such an indulgence would be therefore highly absurd and reprehensible. Because 'persons in the active professions, or in the out-door employments' cannot always 'obtain the means of perpetually breathing in an equable temperature,' are those who can obtain the means, to exclude themselves from the benefit to be derived from such a palliative? After some other cavils of a similar description, the article concludes with the following consolatory information:—'Even cough and consumption are more likely to derive benefit from the dietetic regimen which has lately been proposed by *Dr. Lambe, of King's Road, Gray's Inn Lane!*' Such an advertisement, of such a remedy, does appear to us so very singular, that we can conceive no way of accounting for it, but by supposing the review in question to have been written by Dr. Lambe himself.

ART. XXV. *Narrative of the Conduct of Dr. James Gregory, towards the Royal College of Physicians of Edinburgh, drawn up and published by Order of the College, in Consequence of the various printed Papers circulated by him relative to their Affairs.* 4to. pp. 98. With an Appendix of 42 pages. Printed at Edinburgh.

ART. XXVI. *Historical Memoirs of the Medical War in Edinburgh, in the Years* 1805, 1806, *and* 1807. By Dr. Gregory. 4to. Printed at Edinburgh.

ART. XXVII. *Opinion delivered by Dr. Duncan, Senior, in the College of Physicians of Edinburgh, on the* 13*th of September* 1808, *upon a Charge against Dr. Gregory, for wilful and deliberate Violation of Truth.* 4to. pp. 68. Printed at Edinburgh.

IT is with extreme reluctance, that we call the attention of our readers to the controversy which has given birth to the above writings, and enter upon the consideration of a quarrel of so personal a nature, that, if the honour of the profes-

sion had been consulted, it would never have transpired beyond the assembly in which it originated. At a former period of our labours, while the cause was scarcely before the tribunal of the public, and there were yet hopes, that the differences in question would have been adjusted in an amicable manner, we should have deemed it indecorous to take any notice of the dispute; but now that the appeal has been made, and an award is expected, we should be guilty of injustice to the parties concerned, if we were to preserve any longer silence. Unpleasant and ungrateful, therefore, as our task may be, we shall endeavour to perform it faithfully,—divesting ourselves of every partial feeling, and banishing carefully from our minds the recollection of every circumstance which might give an undue bias to our judgment in the case before us.

In the year 1804, a Committee of the College of Physicians of Edinburgh, consisting of five members, viz. Dr. Spens (the President), Dr. Duncan senior, Dr. Buchan, Dr. Hope, and Dr. Duncan junior, was appointed to revise the laws of the College, and to make such alterations or additions as they should deem advisable. Among other changes, the committee, after some deliberation, thought proper to recommend a particular interpretation, or partial repeal, of an act of the College, which had been passed in the year 1754, prohibiting the members resident in Edinburgh from keeping apothecaries' shops, or practising pharmacy, by themselves, partners, or servants; and to propose an explanatory law, declaring, 'that the restrictions therein mentioned apply solely to such persons as keep or may set up *public* apothecaries' or druggists' shops, for the purpose of selling medicines by retail;' thus leaving it in the power of the members, 'when they saw cause, to furnish the medicines which they judged proper for their own patients.' A similar proposal had, indeed, been submitted to the College, by Dr. Spens, so early as the year 1796; but not meeting, at that time, with the general approbation of the Members, the intended alteration did not take place. The Report of the Committee of 1804, containing the above amendment, was,

however, presented to the College, and underwent considerable discussion at the quarterly meeting in November of the same year: and the Committee, finding that the measure in question was still obnoxious to several of their brethren, obtained leave, about the middle of the following month, to reconsider their Report, for the purpose of withdrawing so much of it as related to the law of 1754; of which proceeding, notice was given to several of the Fellows, who had objected to the proposed clause, and, in particular, to Dr. Gregory, who had expressed his disapprobation of it in very decided terms. In about six weeks after this period, Dr. Gregory, who had been elected one of the Censors of the College, put into circulation two quarto pamphlets, entitled, 'Review of the Proceedings of the Royal College of Physicians in Edinburgh, from 1753 to 1804,' and 'Censorian Letter;' animadverting on the conduct of the Committee,—accusing them of being influenced in their proceedings by the '*most base and sordid motives*,' and of having endeavoured, by '*falsehood, chicane, and breach of faith*,' to accomplish 'a most dishonourable and illegal object.' Two of the members of the Committee (Dr. Spens and Dr. Hope) took the liberty of remonstrating with him on this occasion, and of urging him to refrain from such a publication; as it could answer no useful purpose, the measure objected to having been dropped; but, on the contrary, would tend to injure the College in the opinion of the public, and to create dissensions among its members. To this representation Dr. G. replied, that, as he had begun to distribute his printed papers, the request of Drs. S. and H. could not be complied with; and that his object 'was not to get their proposal *dropped* at present, but to prevent any such proposal ever being attempted again, or any other proposal from being attempted by such means; (secret party-work, &c.)' Defence, p. 70. The circulation accordingly continued, and Dr. Spens and Dr. Hope had the mortification to find their moral characters assailed in the most intemperate manner, in these papers, by Dr. Gregory, who, till then, had professed great friendship and esteem for both these gentlemen,—and their conduct, as members of

the Committee, held forth to general execration and contempt, merely for their having supported the repeal of the bye-law of 1754.

As the 'Review' and 'Censorian Letter' were not laid regularly before the College, that body did not judge it necessary to take any formal notice of the allegations which they contained; but so far were they from thinking the Committee had merited the imputations which were cast upon it by Dr. G., that, in a full meeting of the College, on the 5th February, 1805, a vote was passed, declaratory of their opinion, 'that the President and Committee had acted from the purest motives, and in the most honourable manner, and that they well deserved the thanks of the College.' Of this proceeding a more or less particular account was conveyed to Dr. Gregory, who had purposely absented himself on the occasion; but who, expecting that some strong resolution would have been carried against himself, had requested his friends, Dr. Wright, and Dr. Hamilton senior, to bring him the earliest intelligence of what passed. With the vote, as stated to him by Dr. Wright, Dr. Gregory professed himself perfectly satisfied; and he even went so far as to say, that, if he had been present at the meeting, he would have willingly concurred in the motion.

In this state matters remained till the autumn of 1806, when the College, learning that some of their proceedings, in an affair wholly unconnected with the present dispute, had been misrepresented out of doors, resolved to send a circular admonition to the Members, recommending the strictest secrecy with regard to all their private transactions. Among the other Members, a copy of the admonition was sent to Dr. Gregory, who immediately conceived, that it could refer only to his own conduct in having made the private business of the College the subject of public discussion, by the circulation of his 'Review' and 'Censorian Letter.' At the ensuing meeting in November, therefore, Dr. Gregory attended, and proposed a series of queries with respect to the notice in question; and happening, in the course of the discussion which followed, to make some

allusions to his printed papers, he was told by Dr. Duncan, 'that the College had already given their opinion upon the insinuations contained in these publications, and had virtually decided, that they were scandalous libels.' Dr. Gregory, professing not to understand the meaning of this observation, was referred to the minute-book; and, on the resolution of February 1805 being pointed out to him, he 'declared publicly, *that he knew nothing of it, or never before had heard of it*, or words to that effect.' Of this declaration the College took no particular notice; but, as Dr. G. refused to retract the offensive matter contained in his queries, they judged it necessary soon after to pass a vote of censure on his conduct. This produced a letter of remonstrance on the part of Dr. Gregory, in which he maintained, that the College had, by the resolution of February 1805, pronounced him to be either 'absolutely insane, or the most impudent liar, and the greatest knave, in the country,' and persisted in his denial of all knowledge of that transaction. 'As to the fact,' he observes, 'I must *repeat my solemn declaration and oath before God, that I neither knew nor suspected any thing of it;* nay, that I could not even *have thought it possible*, till the moment when Dr. Duncan senior told me of it, and shewed me the record of it in our minute-book last November, just one year and nine months after the resolution had been passed.' In reply, however, to some observations which were made by Dr. Hope, at a meeting of the College on the 24th of November 1807, on the extreme improbability of Dr. Gregory's remaining so long ignorant of a decision to which he could not be indifferent, and which he had ample means of knowing, as the resolution in question had been printed and shewn to several of Dr. G.'s most intimate friends; Dr. Gregory admitted, '*that he had received information from two of the Members, that the College had passed a resolution on the 5th February* 1805, *returning their thanks to the President and Committee for their trouble in revising the laws, and declaring that they had acted from the best or purest motives;* but denied, that he had been informed, that the College had expressed their opinion, that the Committee had acted *in an honourable*

manner.' This statement naturally excited considerable surprise in the minds of the Members present; and it appearing to them, that Dr. Gregory had been guilty of a deliberate violation of truth, a series of resolutions to that effect were proposed by Dr. Hope at a subsequent meeting, called for that purpose on December 5, of the same year. Dr. G., being called upon for his defence, requested to be allowed till the next quarterly meeting in February, to prepare it; as he declined to make any *viva voce* defence, and proposed to deliver it in print. At length, after many delays, he gave in the whole on the 2d day of August 1808, under the form of the huge 4to volume, that now lies before us. In this performance, of which a very small portion can be said to relate to the immediate point in dispute, he endeavours to vindicate himself from the charge of falsehood, and to shew, that, although he might have been informed by Dr. Wright, that the College had declared, that their Committee had acted from *the best* or *purest motives*, he was not bound to infer, that they had by such a decision pronounced their conduct to have been *honourable;* as many sordid and even criminal actions may spring from *pure motives;* and his alleged acquiescence in the vote in question had proceeded from an idea, that the College meant to convey, by the terms of it, 'a delicate censure' on the President and other Members of the Committee, their conduct having, in Dr. G.'s opinion, been governed by a *pure* love of gain. The following passage from Dr. Gregory's 'Remonstrance to the Royal College,' which we quote almost at random, will convey some idea of his general manner of reasoning on the occasion.

'In the course of a long life, I have never once heard breach of faith, chicane, and falsehood, praised, or called most honourable; and times innumerable I have heard various instances of such conduct reprobated as completely dishonourable. I can conceive nothing in human conduct more completely repugnant to the common or universal notion of what is honourable, than chicane and falsehood employed to accomplish, and at the same time to cloak, a deliberate, wilful breach of faith. I do not think that theft and robbery are more repugnant to the common notion of what is *honest*, than falsehood,

chicane, and breach of faith, are to the notion of what is *honourable* in human conduct. If a man were to steal a pocket pistol, and a bay horse, in order to take a purse on the king's highway, it would be at least new, and somewhat strange, to say that he acted in the *most honest* manner. And even if it should be proved that this had been said by a Royal College of Physicians, or by any other respectable society of men, I do not think that any man could reasonably be blamed, or suspected of falsehood, who should declare and swear, that, till he saw the evidence of it, he had not suspected it, and could not have thought it possible. And if it should be stated in favour of the man who stole the pistol and the horse, and took the purse, that he acted from the purest motives, a desire to promote his own pecuniary interest, to provide for his family, and to pay his debts, without any malevolence towards the persons with whose property he had made so free; though the goodness of those motives, considered by themselves, apart from the actions proceeding from them, could not rationally be disputed; yet no man, I am sure, could think the admission that the *motives* were good, equivalent to declaring, that the actions proceeding from them were *most honest;* and, for my part, I should think such an admission, however explicit, of the goodness of the motives, a very imperfect excuse for the actions proceeding from them: and I should think the man who acted in that most honest manner would run a very great risk of being hanged, notwithstanding the purity of his motives.' p. 49, 50.

Such arguments did not avail much with the Royal College; for, on the 13th September following, after a discussion of nearly twelve hours, a resolution was passed by a majority of seven to three, declaring,

'That the College taking into consideration the statement of Dr. Gregory, of the reason of his absence from the meeting of the 5th of February 1805,—the solemn declaration and oath before God of his ignorance of "that proceeding," and of his having no suspicion of it,—the subsequent acknowledgment or confession of Dr. Gregory, so inconsistent with that declaration and oath,—and the testimony of Dr. Hamilton, and the different statements of Dr. Wright, all perfectly contradictory of that solemn declaration and oath,—Do, in respect that these statements by Dr. Gregory were deliberately made within their own walls, or in writings addressed officially to their President, and in the course of discussion relating to the private business of the

College, feel themselves called upon to declare, that they consider such violation of truth on the part of Dr. Gregory, to be highly immoral, and deserving the reprobation of the College, and they do accordingly express their reprobation of the same, along with their regret and mortification, that any one of their body should have acted so as to call forth an animadversion and censure of this nature.'

This resolution, which was entered on the records of the College along with a full exposition of the reasons which had led to its adoption, could not prove very acceptable to Dr. Gregory. Accordingly, at the distance of some months, he transmitted a paper, protesting against the proceeding, ' as contrary to truth, contrary to evidence, grossly unjust and malevolent with respect to him, and evidently a continuation of certain well-known proceedings of gross falsehood and malevolence towards him;' referring for proofs of his assertions to his printed papers, and pledging himself to ' take, without delay, the most effectual and public measures fully to vindicate his character, and to repel and expose that additional foul injustice,' which seven Fellows of the College had conspired to do him, &c. This protest was referred to a committee, who, on the 13th May 1809, presented the following report:

' The Committee have deliberated upon the paper, indorsed, " Protest by Dr. Gregory, February 7th, 1809." It appears to them, both in its matter and style, to be equally inconsistent with truth and decency. It is their opinion, that it ought on no account to be ingrossed in their Records, but kept *in retentis*, as one of the many proofs of his temper and conduct towards the College, and as a justification of the measures towards him, which he may compel them to adopt.

' They think it necessary to propose, that the author of such a paper should be suspended from the right which he possesses of attending their meetings, and from all the rights and privileges he enjoys as a Fellow of the College, until he make satisfactory acknowledgments: a sentence equally requisite for the restoration of peace and amity, during so many years disturbed by the outrages of Dr. Gregory, as for the purpose of stigmatizing these outrages, though in a manner far more lenient than they deserve.' Narrative, p. 97, 98.

The report of the Committee, as above stated, was adopted by a majority of 8 to 2; and Dr. Gregory was consequently suspended from the rights and privileges of a Fellow of the College.

We have thus given a succinct account of these extraordinary proceedings, which, for the last four years, have inflamed the minds of our professional brethren in Edinburgh, and caused 'war to wage,' but luckily no 'blood around to pour,' though at one time it was dreaded (we believe upon no slight grounds) that more destructive weapons than pens and paper would have been resorted to. If we have abstained from entering upon the history of all the by-fights, and skirmishes, and ruses de guerre, it has certainly been from no desire to misrepresent or exaggerate the conduct of either party, but in order that we might place the great battle in full view, and enable our readers to appreciate more correctly the merits of the respective combatants. Those who have read the publications now under consideration, with impartial judgment, will grant, that it would have been no difficult matter to have made out a much stronger case, at least on one side: but we have thought it the fairest mode of proceeding, to refrain even from those touches of colouring, which might not have been inadmissible on the occasion, and to allow the facts to speak, in some measure, for themselves. It now remains for us to submit a few of those reflections, which have occurred to us upon a deliberate review of the whole of the proceedings in question.

In the first place, though we are ready to acquit the Committee of the College from the charge of having been actuated by 'base and sordid motives,' and think, that they have proved most satisfactorily, that a majority of the members of which it was composed, could have no private views to serve, by their proposal for amending the bye-law of 1754, we must agree with Dr. Gregory, in considering the intended additional clause as not sanctioned by the terms of the act, and as inconsistent with its general tenour. We farther coincide with him in opinion, that such an alteration would not have greatly tended to support the dignity of the physi-

cians of Edinburgh, but, on the contrary, might have had the effect of injuring their character, and lowering them in the estimation of the public. How far such an alteration would be politic, in a city where the medical practice is in a manner engrossed by the Members of the College of Surgeons, (who supply their own patients with medicines) is a question into which we decline entering very minutely, and which we do not reckon ourselves altogether competent to decide. But it has ever appeared to us advantageous, to separate the various branches of the profession as completely as possible, and to place the physician, in particular, on that proud station, where he can be suspected of no mercenary views, and where he must command the respect of his employers. Without meaning, therefore, to insinuate any thing to the disparagement of our brethren of Edinburgh, we may be permitted to declare our belief, that any change in the mode of practice, of the nature of that proposed, would not eventually have improved their condition, and that it is better for them to sacrifice the prospect of immediate gain, than risk the loss which they might ultimately sustain, by the degradation of the art itself. On this point we find, in the papers before us, an opinion, which was given by the late Solicitor General for Scotland, in answer to the queries submitted to him by Dr. Duncan senior; which is so characteristic of the shrewd sense and strong judgment of that eminent lawyer, and which places the disadvantages of the proposed alteration in so clear a light, that we shall make no apology for quoting it.

'I think that the act would be violated by the practice here mentioned. A physician's fee is an honorary, and may be less or more, according to the liberality or means of the patient; from which it seems to follow, that if he gives advice, attendance, and medicines, and receives money from his patient, it must be held, that not the whole, but something less than the whole, is the honorary; and the whole being paid for his services without distinction, some part of it is for the medicines. It is not conceivable, that the patient should not recompense him for his medicines in one way or another; and I am not aware of any case in which they could be said to have been given for nothing, unless it were where the physician takes no fees at

all, even for attendance. To evade the act against theatrical entertainments, the players used to advertise music for so much, and the play *gratis*. But it was well understood, that the money was given for the play, without much regard to the orchestra; and now nothing theatrical can be exhibited in places where liquors are sold; as, in paying for such liquors, the audience is understood to pay for the exhibition. Though I highly respect the honourable profession of physic, yet I cannot shut my eyes to the exact similarity of the two cases. The physician who professes to give medicines *gratis* to those who employ him, is paid by his fees both for his attendance and his medicines.'

Dated 'Edinburgh, 8th August 1806.' (Signed) 'JOHN CLERK.'

Impressed with these sentiments, we give Dr. Gregory credit for his opposition, in the first instance, to the partial repeal of the act of 1754; and if it was in consequence of his exertions on the occasion, that the measure was finally abandoned, we think that he was entitled to the thanks of his brethren. Whatever language he might have used, whatever remonstrances he might have employed, to effect this purpose, his conduct would have appeared meritorious. But, after the obnoxious proposal was withdrawn; after the original law had been declared to be in full force; and after the direct assurances, which he had received, that there was no intention of reviving it; we can find no excuse for that 'breach of faith' which Dr. Gregory himself committed, by divulging the private transactions of the College,—for that violation of the solemn promise, which he had made on his admission into the College, to observe strict secrecy with regard to every thing 'acted or spoken' at its meetings, that he might think tended 'to the prejudice or defamation of the same, or any Member thereof.' Unmindful, however, of this obligation,—unmoved by the entreaties of his brethren,—regardless of their tranquillity and welfare, he proceeded to distribute his printed papers, teeming with the most violent invectives, and what we hesitate not to term the most illiberal abuse, against all who happened to differ from him in opinion; and this for no other reason that he himself could assign, but that he had gone so far, and was deter-

mined not to recede, in order that such a proposal might never be attempted again. If he felt no compunction at severing the bands of long established friendship, he ought to have recollected, that, by this intemperate conduct, he was staking his own character, and exposing the motives of his own actions to the severest scrutiny. If the dissensions, which he had been the great means of creating and fomenting, were, in reality, such a subject of merriment to him, as he pretends they were, he ought to have considered, whether they would appear in a similar light to the impartial spectator. For our own parts, we can say, that his mirth appears to have been very much misplaced; and, though far removed from the scene of contest, and perfectly uninterested in the issue of the fight, we can yet declare, that we participate warmly in the feelings of those respectable individuals who have been the chief objects of Dr. Gregory's rough and unmannerly attack; and we truly sympathize with Dr. Duncan senior, who, in the preface to his 'Opinion,' states, that this controversy has, 'in the short space of three years, done more to interrupt his happiness, than all the other occurrences of his life, for thirty years before.' Dr. Gregory cannot accuse us of delivering a hasty judgment, when we inform him, that these are the impressions which were left on our minds by the perusal of his 'Review' and 'Censorian Letter,' five years ago.

In the 700 pages, which he has since printed, we have seen nothing to induce us to alter our opinion of the case, but a great deal, on the contrary, to excite our regret, that a man of such learning and talents as Dr. Gregory indubitably is, should, instead of applying that learning and those talents to the advancement of his art, pervert them to the most ignoble of all purposes,—the engendering of hatred and strife among his brethren. Were this the proper place, we certainly should not shrink from the task of refuting at length those metaphysical subtleties, with which he has so freely interspersed his Defence, and by which he has endeavoured to justify his proceedings. Thus much, however, we may venture to affirm—that the virtue of any action is

universally determined by the greater or less *purity* of the motives from which it proceeded; and that it is a flagrant abuse of language, to maintain, that men might be governed by the *best* and *purest* motives, and yet act in a manner, that is *base, sordid,* and *dishonourable.* To say, that, by the *purest motives,* might be understood the *pure love of money,* we consider as a wretched quibble, which can impose on no one who is capable of reasoning on the subject. From the abstract of the proceedings, which we have before given, it must have appeared sufficiently evident, that upon this subterfuge Dr. Gregory rests his chief plea: but, even admitting his construction of the phrase in dispute, it is impossible to reconcile the solemn asseveration, that he did not know any thing of the vote of February 1805, with his subsequent confession, that Dr. Wright had informed him of the College having declared, '*that the Committee had acted from the purest motives,*' (understanding thereby '*the pure love of money.*') Can it, however, be supposed, that a body, like the Royal College of Physicians of Edinburgh, would gravely pass a resolution that allowed of such an interpretation; and that the persons whom it concerned, should receive it as a matter of favour? If Dr. Gregory chose to remain one year and nine months ignorant of the precise terms of this vote, which he had so much interest in knowing, we certainly can conceive the possibility of his being completely satisfied, in his own mind, of the consistency of all his actions; and of his being able, with the help of a little casuistry, (a science, by the by, which he affects to despise, but in which he shews himself to be no common proficient,) to account for all the seeming contradictions and inconsistencies of his statements. We believe, also, that Dr. Gregory may have all along been thoroughly convinced of the great purity of his own motives, and of the perfect uprightness of his intentions; but we must take leave to express our doubts, whether Dr. Gregory was all the while a proper judge of his own actions, and whether he had had the courage 'to pull off the mysterious veil of self-delusion, which covered from his view the deformities of his own conduct.' To reason with him in his own

style; we may observe, that, though he may have commenced the warfare with his professional brethren *from the purest motives*, he cannot be said, in the latter periods of the campaign, to have acted in the *most honourable manner*.

Several passages of his 'Defence' have strongly reminded us of the morbid sensibility of temper, which formed so distinguishing a feature in the character of Rousseau. Like that discontented man, Dr. Gregory appears often to have seized upon the most innocent expression, or the most insignificant gesture used in conversation; and after brooding over it for a month, to have discovered in it the proofs of a horrible plot and conspiracy. (See, in particular, pages 82, 86, 151, 443.) Yet Dr. Gregory, throughout this and all his other publications, is continually boasting of the 'fairness' of his dealings, of his 'most candid offers,' and his 'most liberal concessions;'—forgetting, that 'Charity vaunteth not itself,' and that the world never fails to call in question the purity of those who talk most loudly of their own virtues. In the management of the present controversy, we take upon ourselves to affirm, that, although Dr. Gregory has professed a great deal of candour, he has, in fact, shewn very little. It was not candid in him, to persevere in the design of exposing the conduct of his brethren, after they had agreed to withdraw the offensive proposal, and had given him the earliest notice of their intention. It was not candid in him, to attribute the basest and most sordid motives to the Members of the Committee, without obtaining and producing the fullest, the most convincing, and the most incontestable proofs of the justness of the accusation. It was not candid in him, to make this calumnious attack, in order to meet a supposed emergency. It was not candid in him, to disavow all knowledge of the proceedings of February 1805; when it was afterwards clearly proved, that he had received notice of, at least, the material part. It was not candid in him, to assert in his Defence, that no attempt had been made to point out to him any error in the statements contained, or the sentiments expressed, in his Review and Censorian Letter; when it has been satisfactorily shewn,

that Dr. Buchan took no small pains to point out to him many errors, and to convince him, that, in his judgment of the character of the Committee, he was completely mistaken. And it *is* not candid in him, to persist in urging charges which have been fully refuted, and which probably had never any foundation but in Dr. Gregory's own brain.

ART. XXVIII. *A Treatise explaining the Impossibility of the Disease termed Hydrophobia being caused by the Bite of any rabid Animal.* By W. Maryan, Surgeon. 8vo. pp. 60. Cox.

ART. XXIX. *The History of Canine Madness and Hydrophobia: with the Methods of Treatment, Ancient and Modern.* By Geo. Lipscomb, M. D. &c. 8vo. pp. 211. Budd, Robinson, &c.

THE purport of Mr. Maryan's treatise is to prove, that dogs cannot inflict any disease upon man; and that hydrophobia is merely a nervous affection, a disease of the imagination, which is very easily cured, by convincing the patient that nothing is the matter with him. The author seems to have arrived at this notable conclusion, by considering that *witchcraft*, which was once believed to exist, has been written down, and he, with great diffidence, hopes to do as much for hydrophobia, although his experience has taught him, 'that there is an allowance due to *prejudice* even in the best informed minds.' Some profound reflections on cow-pox have also tended to confirm his notions on the subject.

'Cows,' says he, 'are subject to pustulous sores on their teats, and horses on their heels; but neither of these, till compounded, are capable of affecting man:—and were this ichor conveyed to a variety of other animals, it would in all probability produce, and become, a compounded ichor equally malignant with the small-pox itself; and, as we are not acquainted with any disease, that, uncompounded, can affect the human species; *i. e.* solely from the juices of any single animal; therefore do I conclude, and I trust very fairly conclude,

that there can be no possible resemblance between the cow-pox and the bite of a mad dog. It has been, however, generally supposed that the juices of a dog, in a diseased state, were sufficient of themselves, uncompounded with those of any other animal, to decompose the juices of man, so as to render them unfit for the purposes of life, &c. and that madness and death would certainly ensue. But, in conceiving this erroneous, I reply, I never heard of a single person, whether coachman, carman, cowherd, or shepherd, who was fearful of becoming affected with any of the diseases of an animal that had even died under his care.' p. 12, 13.

As the preceding paragraph is the most argumentative and ingenious that we could select, we may safely hope that the insignificance of his pamphlet will spare Mr. Maryan the mortification of ever hearing that it had occasioned mischief, by inducing people to believe, that no such disease as hydrophobia can possibly affect the human species.

Doctor Lipscomb's work is not quite so harmless, for he writes with an air of confidence, and a degree of self-importance, which sometimes pass in the world for experience. His publications, too, are numerous, and of various kinds. When only *Mister* Lipscomb, surgeon, he wrote a small treatise on Canine Madness, and from time to time favoured the public with his lucubrations on putrid fever; the high price of provisions; the monopoly of farms; with an address to the volunteers; remarks, moral, political, historical, literary, &c. together with accounts of journeys into Wales, and other distant parts of the empire; a description of Matlock bath, and other mineral springs; observations on asthma; and, in a late publication, he has *exploded* the cow-pox, and *exposed* its defenders.

> ' Ses ecrits, il est vrai, sans art et languissants,
> ' Semblent être formés en depit du bon sens.'

Still, Mister Lipscomb has had the felicity of dedicating to different dukes and viscounts, and the present volume is pompously addressed ' To the most High, most Mighty, and most Illustrious Prince Frederic, Duke of York and Albany, Earl of Ulster,' &c. Perhaps it might have answered better,

if the work had been dedicated to the Duchess of York, as we understand her Royal Higness has a large establishment of the canine species, which might occasionally require the *soi-disant* doctor's assistance.

Mr. Lipscomb's former pamphlet on this subject was so truly contemptible, that we suppose no person could be found to read it. He has now produced a larger volume, and has changed his title of surgeon for that of M. D. &c.; so that, if, by any chance, either work should sell, Mister Lipscomb may treat patients *quasi chirurgus*, and also prescribe for them as *Dr.* Lipscomb: for, in his recent publication, he takes not the least notice of *Mr.* Lipscomb, nor of his pamphlet; and to strangers he may appear to be two different persons. We knew an apothecary in the country, who, after many years' hard riding, had got a diploma, and who, when asked by one of his old patients whether her case did not require a physician, replied in the affirmative, and added, with much gravity, that he was happy he could save her the trouble of sending for one, as he had, very fortunately, taken out his diploma the day before, and was very much at her service.

> 'Chirurgus fuerat, nunc est vespillo Diaulus.
> 'Cœpit quod poterat, clinicus esse modo.'

But we by no means wish to prejudge the *doctor:* his pretensions are high, and we shall estimate his merit by the execution, rather than the probable motives of his work. It is needless to insist, either on the interest or the importance of a disease like Rabies Canina, which has destroyed, wherever it has attacked our species. Much has been written on the subject, and it still presents a fair field for inquiry. In his prefatory discourse, *Dr.* or *Mr.* Lipscomb says, that, 'having had numerous opportunities of observing the effects of different poisons introduced into the human system, his attention was naturally directed to the prevalence of Canine Madness, in its recently destructive ravages, with peculiar earnestness and anxiety.' p. vi.

'I was prompted to the undertaking by many opportunities of seeing and attending to the treatment of *hydrophobous* persons, and encouraged by the favourable and flattering reception which my opinions met with from a great variety of persons, to whom they were fairly and explicitly communicated; and my resolution to lay before the public the sum of my researches, and the result of my experience, was determined by the success which has attended my practice, and the illustrious patronage which has been graciously extended to my labours for promoting public benefit, and the interests of humanity.' p. ix.

The arrogance of this writer keeps pace with his inflated sentences. After telling us, what we know could not be the fact, that 'the precarious and fatiguing avocations of professional duty' prevented him from making his work 'correct and elegant,' though 'I will not' (he observes,) 'accuse myself of so much sluggishness of disposition, or want of genius, as to be disqualified for giving it a more perfect finish, or a higher polish:' he continues, 'but I was desirous of presenting to the world, without delay, at least some portion of information which *they have long wanted.*' p. xii. We are not so hardy as to assert, that *Dr.* or *Mr.* L. could have rendered this volume more perfect than it is; but, certainly, the information which he professes to communicate, and which the world has so long wanted, has eluded our minutest search. In the first chapter, the author informs us, that he has been induced to favour the public with his remarks, from 'the frequent prevalence of Canine Madness within the two last years,' and, 'more particularly, because the specific nature of this distemper has been but little understood,—the descriptions given of it have been, in general, insufficient for any practical purpose; and, because,' says he, 'I have had ample opportunities of seeing and investigating many of the cases of this description which have lately occurred.' 'The accounts (he continues) which have been published, respecting this disease, are mostly incorrect, often contradictory, and sometimes false,' &c. We might extend these extracts to great length; but the spirit which dictated them, must be sufficiently manifest. Notwithstanding this affecta-

tion of originality, this boast of experience, this abuse of preceding authors, nearly the whole of the volume is made up from the writings of others, although the compiler has not availed himself of many valuable facts, which, within the last three years, have been detailed on the subject, in almost every periodical publication on medicine, besides some which have appeared in more respectable works. The parade of learning, and shew of references, are very frequent, and display, at least, considerable industry; but every book-maker knows the use of indexes; and a surly critic, by ruffling the plumage, is apt to discover the *daw* beneath. Should *Dr.* or *Mr.* L. ever again have occasion to refer to Juvenal, we would advise him to omit specifying the particular *book* in which the satire is to be found: as, in his anxiety to prove that Rabies signifies anger, amongst many other authorities, we find him quoting Juvenal, as follows,

'Juvenalis, Sat. vi. lib. 2. l. 648; ibid. Sat. xv. lib. v. l. 126.'

As in the extensive waste of Zahara, the weary traveller sometimes is refreshed with the appearance of a verdant shrub; so, amidst the exuberant learning of this doubtful personage, we now and then are gratified with an original remark. We quote the following observations with unqualified approbation; and think them very applicable to our author in particular.

'It is to be lamented, that on medical subjects writings have been multiplied more than ideas, and the labours of the industrious exhausted in preparing volumes of useless repetitions, destitute of a single line of genius or originality.' p. 144.

'There is, perhaps, nothing more injurious to the cause of science, than its being committed to the hands of rash and unreflecting persons: and the advantages which might be naturally expected from the learned labours of an experienced teacher, are often lost to the world, through the mistaken zeal or ignorant enthusiasm of his inconsiderate admirers.' p. 151.

But it is time to say something of hydrophobia. In the last chapter, we have the detail of the author's practice; and to do him justice, we must bear in mind, his 'many

opportunities of seeing and attending to the treatment of *hydrophobous* persons.' The bite having been inflicted, he acquaints us, that 'it is the duty of the physician or surgeon to prevent its evil consequences.' The *usual* methods of effecting this are then proposed; and we perfectly accord with the author's opinion, 'that a speedy and immediate destruction of the part into which the virus is inserted, alone affords a reasonable hope of interrupting the conveyance of, at least, some portion of it into the system.' The respective advantages of the knife, and of the caustic, are next considered, and our author gives his sanction in favour of the latter, and prefers 'Lapis Infernalis' to any other caustic, although he thinks 'Butter of Antimony' may answer equally well.

'But lest any particle of the virus should have been absorbed, mercurial ointment by friction in such a manner as to penetrate into, and pervade completely, the lymphatic system, should also be used. For this purpose, inunction, performed boldly and copiously, will be found most effectual.' p. 179. 'If from any circumstance whatsoever, the bitten part have been neglected, or any symptom of rabies have taken place, the only hope which experience has presented to us, depends on the speedy and immediate influence of mercurials on the system.' p. 180.—'When hydrophobia has actually taken place, delay in the use of this powerful remedy excludes even the shadow of hope.' p. 181.

The author then talks of *camphor with volatiles*, being the most powerful agents in *subduing* the tremours and mental irritation, which occur in the *last* stage of hydrophobia, 'without diminishing or interrupting the activity and effect of the mercury, previously employed.'

After a short inquiry into the manner in which 'mercurials produce benefit in cases of envenomed bites,' the author acknowledges, that respecting these things he does not take upon himself to determine:' but it would have been more philosophical first to have ascertained, that mercurials were really productive of benefit in cases of envenomed bites: in hydrophobia, whatever the author may assert to the con-

trary, certainly they are not. Yet, affecting to be sagacious, he observes,

'The experience which I have yet had of the efficacy of this remedy, does not enable me to decide *positively*, whether *copious salivation* be necessary for the relief of the spasmodic affection.' p. 186. 'Analogy inclines me to suppose, that the benefit produced by mercury would be as complete without a great degree of ptyalism, as with it, provided the medicine pervade the lymphatic system *generally*.' —'But, in several cases, in which I have seen tremours, agitation, and spasm, yield to the influence of mercury, it is right to confess, that a copious salivation preceded the cessation and relief of those symptoms.' Ibid.—'In the practice which I have hitherto witnessed, the abatement of the symptoms, as soon as the mercury had pervaded the system completely, seemed to justify the discontinuation of the remedy.' p. 187.

After his boasted opportunities of seeing and investigating this disease, after the great practice and experience which he pretends to possess, after the confidence with which he speaks of the beneficial effects of mercury in the cure of it, we could not doubt, that the author would corroborate his assertions by the communication of those cases in which he had been thus eminently successful. Since he has been so lavish in his abuse of the incorrectness and insufficiency of authors on the subject, we did also expect, that, instead of telling us what Aristotle wrote, and amusing us with stories about Pompey, and King Mithridates, he would, at least, have presented us with some facts derived from his own observation. At length, having approached the concluding pages of the volume, when our anxiety had increased almost to distress; we were rewarded with an abridgement of the case of the poor woman in Rupert Street, which was published in the newspapers by Dr. Moseley, and which, it seems, our author attended at the request of Dr. M. In the review of Dr. Moseley's treatise, in our first volume, we assigned reasons for not regarding this as a case of hydrophobia. Now, although it has been inserted, like other advertisements, in the diurnal prints; although it has formed the basis of two pamphlets, and we presume also, might be the

remote cause of exciting Mr. Lipscomb's pen on the present occasion; we still maintain our former opinion. The symptoms, for which the poor wretch was subjected to a most severe application of mercury, appear to have been induced solely by fear. Even the dog was not affected with Rabies, but simply with the Distemper.

Since the occurrence of this miserable case, our author says, that *many* have come under his observation, 'and experience has confirmed the opinion, before advanced, of the superior utility of mercurial inunction over every other method of treatment.' p. 188. But the *doctor's* exquisite sense of delicacy forbids him favouring us with the relation of these cases, which we have no hesitation in declaring, *never existed.*

'It was originally my intention,' he observes, 'to have inserted a list of patients, in whom either the symptoms of Rabies itself, or of the venom being absorbed, have afforded the strongest conviction of the efficacy of the practice inculcated; but *delicacy forbade* it. Scepticism, either real or pretended, has too often prompted to personal inquiries highly indecorous and distressing. I will not, therefore, expose the feelings of any one to the curiosity of the indelicate or impertinent.' p. 189.

From this, and, indeed, from the whole of the book, we conclude that it was not written for the perusal of medical practitioners; and, therefore, shall dismiss it with an admonition to the author, that there are cases where delicacy may be criminal, though we by no means accuse him of concealing any portion of his knowledge. To withhold information on such a subject, would be both cruel and impolitic. Whoever, from accidental discovery or scientific research, ascertained the means of recovering persons from the direful effects of Rabies Canina, would be certain of obtaining the grateful applause of his country, and the highest honours and emoluments of his profession. If, then, *Dr.* or *Mr.* Lipscomb has not been attempting to abuse human credulity by false pretensions; he has done himself great injustice, in concealing those facts, without the minute detail of which,

all his assertions, respecting the utility of mercury in the cure of Hydrophobia, are unsatisfactory and inconclusive. Why should it succeed when administered by Messrs. Moseley and Lipscomb, and uniformly fail when given by other practitioners? The pretext is too thin. By his mock delicacy, *Doctor* L. may gull a few simple individuals, but he very well knows, that he can establish no one medical truth by his own assertions, unsupported by one tittle of evidence.

ART. XXX. *An Inquiry into the Antivariolous Power of Vaccination; in which, from the State of the Phenomena, and the Occurrence of a great Variety of Cases, the most serious Doubts are suggested of the Efficacy of the whole Practice, and its Powers at best proved to be only temporary. From which will also appear the Necessity of, and proper Period for again submitting to, Inoculation with Variolous Virus.* By Thomas Brown, Surgeon, Musselburgh. 8vo. pp. 327. Constable and Co.

ART. XXXI. *Report of the Surgeons of the Edinburgh Vaccine Institution: containing an Examination of the Opinions and Statements of Mr. Brown, of Musselburgh, on Vaccination.* Drawn up at the Desire of the Managers, and published by their Direction, for the Benefit of the Institution. 8vo. pp. 44. Constable and Co.

ART. XXXII. *A Letter in Reply to the Report of the Surgeons of the Vaccine Institution, Edinburgh; with an Appendix, containing a Variety of Interesting Letters on the Subject of Vaccination, and including a Correspondence with Dr. Duncan, Dr. Lee, and Mr. Bryce: from which also the Public will be able to appreciate the Authority of the Surgeons of the Vaccine Institution, and to form a correct Opinion on the whole Subject.* By Thomas Brown, Surgeon, Musselburgh. 8vo. pp. 96. Appendix, pp. 28. Murray.

ART. XXXIII. *Practical Observations on the Inoculation of Cow-Pox; pointing out a New Mode of obtaining and preserving the Infection; and also a certain Test of Perfect Vaccination. Illustrated by Cases and Plates.* The Second Edition. With an Appendix, *containing Additional Observations, together with a Plan for extinguishing the Contagion of Small-Pox in the British Empire, and for rendering the Vaccine Inoculation general and effectual.* By James Bryce, F. R. S. Edinburgh, &c. 8vo. pp. 214. Appendix, pp. 132. Murray.

ART. XXXIV. *Reflexoens e Observaçoens sobre a Pratica da Inoculaçao da Vaccina, e as suas funestas Consequencias feitas em Inglaterra.* Pelo Dr. Heleodoro Jacinto de Araujo Carneiro, &c. pp. 136.

ART. XXXV. *Reflections and Observations on the Practice of Vaccine Inoculation, and its melancholy Consequences; with a True Account of the late Events which happened in Portugal and the Brazils to the Persons Vaccinated.* By Heleodoro Carneiro, M. D. Physician to the Prince Regent, &c. pp. 96. Callow.

ART. XXXVI. *A Plain Statement, intended for the Information of the Public, of the Comparative Advantages of the Cow-Pox and Small-Pox Inoculations; with an Abstract of the Report of the Royal Colleges of Physicians and Surgeons, of London, Edinburgh, and Dublin, and Opinions and Testimonials of many of the principal Physicians and Surgeons on the Cow-Pox.* By T. Smith, M. D. late Physician to the Nottingham General Hospital, &c. 8vo. pp. 48. Mawman.

ART. XXXVII. *A Letter, addressed to Richard Pew, M. D. in Answer to his Observations on an Eruptive Disease, which has lately occurred in the Town of Sherborne, Dorset, after Vaccination.* By Henry Smith Brice, Surgeon, of Sherborne. 8vo. pp. 30. Callow. Printed at Sherborne.

ART. XXXVIII. *Cheap Tract on the Cow-Pox. A Plain Statement of Facts in Favour of the Cow-Pox, intended for Circulation through the Middle and Lower Classes of Society.* By John Thomson, M. D. &c. one of the Physicians to the Halifax Dispensary. 8vo. pp. 24. Crosby. Printed at Halifax.

ALTHOUGH the controversy respecting vaccination has changed its seat, and flourishes at present in the sister metropolis, it has not undergone much alteration in its character. It is still a controversy in which the understanding and the passions are jointly engaged. There is, indeed, an appearance of candour, a studied display of sober investigation and of an ingenuous respect for truth, in the volume of Mr. Brown, at least at the commencement and conclusion of it, which may tend to prepossess the reader in the author's favour, and to dismiss him in complacency and good humour. The author would have us believe, that, after being 'as violent and unreasonable a partisan' in the propagation of cow-pox 'as any of his brethren,' he has been suddenly awakened from the dream of prejudice and folly by the bright rays of truth and reason, which have broken in upon his intellects. He does not inform us, whether his visual organs have been 'purged with euphrasy;' but some such operation can alone explain the extraordinary and speedy augmentation of sight, which he has obtained. He has all at once discovered, that he, in common with the rest of the profession, has long been hood-winked, and groping in the dark: he is now convinced, that, 'for these last three or four years, we have been *all* guilty of rejecting evidence that deserved more attention, in consequence of the strong prepossessions which existed, from the very persuasive *proof of its* (the cow-pock) *resisting inoculation and exposure to the epidemic,*' (what more could be expected or desired?) 'and from our judgment being goaded and overpowered with the positive and arbitrary opinions of its abettors. Nay, he has now also found out, that our 'guilt' and folly were altogether founded upon visionary evidence, for that 'it *was* evident,

that Dr. Jenner's facts were far from conclusive; they were even contradictory, and it was acknowledged that nothing analogous existed:' (p. 2:) and he proceeds to shew, that nothing but contradiction, inconsistency, and confusion, has been predominant among the supporters of vaccination, from its very origin. This is candour, quite *unique* in extent. For we know no man, who is ready to acknowledge himself so destitute of understanding, as to have been, for ten years, the dupe of so palpable an imposition,—to have been, for ten years, the slave of authority in spite of his reason and of his senses. We wish not to misrepresent the opinions of any man: but this is not a picture of the ordinary progress of the human reason. It is possible that a man may suddenly change his belief of any fact, from the force of new evidence presented to him: but it is altogether improbable, that he should not only at once reject the fact itself, but that he should, at the same moment, discover, that the whole of the former evidence, upon which his conviction had rested, and his practice had been founded for ten years past, is a chaos of contradiction and imbecility, from the beginning to the end;—and that he should turn about, and attack, with ridicule and with acrimony, those with whom he had so long associated in maintaining the doctrine which he now relinquishes, and in promoting the practice which he now condemns. This is unnatural; therefore, we believe it to be untrue. The whole frame and tenour of the mind is not changed so suddenly: 'nemo *repente* fuit, &c.' Mr. Brown has been brooding over these changes of principle for some time past; and he now comes forward, not with 'serious doubts' and inquiries, but with decision; leaving no argument, fact, inuendo, or sophism, in the back-ground, which might aid him in disproving the evidence in favour of vaccination.

We trust that the bent of these observations will not be misunderstood. Far be it from us to condemn, in the gross, the dereliction of former opinions, or to applaud a pertinacious adherence to any set of principles, in opposition to evidence. It is against a dereliction of opinions, independent of the variations of evidence, or incommensurate with the

extent of these variations, that we enter our protest: because, in such cases, some sinister object is naturally to be inferred. Upon these grounds, we have disapproved of the altered doctrines of Dr. Adams, who still admits the evidence in favour of the advantages of vaccination; and, upon similar grounds, we must condemn the sudden tergiversation of Mr. Brown, because it has carried him far beyond the mere failure of evidence, which he supposes he has detected. A mere failure of evidence, even, had it not been as small and partial as Mr. Brown himself represents it, could only have led to doubt; but the anxiety he has shewn to detect contradiction and confusion in the writings of Dr. Jenner, and of all the other advocates for vaccination, to impugn their testimony, and to pervert their statements into admissions, which they never made, and the general attempts he has made to undermine the cause, seem to shew, that his conviction has not *followed* merely from the evidence; but that much of the evidence has been sought after to corroborate an opinion already taken up.

There is an unfairness, too, in some of Mr. Brown's proceedings, which imply rather a determination to make an impression on the public mind, unfavourable to vaccination, than a desire to excite ingenuous discussion, or to ascertain or disseminate truth. He has dedicated his book to Dr. Monro, not only without permission, but contrary to the Doctor's request; and employed terms, which are very equivocal, to say the least of them, and seem to have been intended to give the apparent sanction of that venerable name to the author's opinion. For ourselves, we should certainly have inferred Dr. Monro's scepticism, if not his total disbelief, regarding the efficacy of the practice, if Mr. Brown (in his Reply, &c. p. 7,) had not given us the following information:

'The day before the book was ready for publication, I was favoured with a letter from Dr. Monro, declining the honour of the dedication, and declaring his complete conviction of the perfect powers of vaccination, as a preventative [preventive] of small-pox, if the operation is properly conducted.'

Mr. Brown states, likewise, ‘ it is perhaps proper to notice, that I carefully avoided having any communication with the different practitioners by whom the children were vaccinated, being aware of the strong hold that system has upon the human mind, more especially in this very important subject,’ &c. p. 18.

Was it a desire to ascertain the truth, that led him to shun the only sources of accurate information, the testimony of the inoculators themselves? Was it an anxiety to inform the public, that impelled him to anticipate rational investigation, by pouring forth the crude and unsanctioned suppositions and recollections of mothers and aunts, when medical records were within his reach? The supposition were absurd.

Thus much in respect to the manner of Mr. Brown's proceedings: the matter, however, which he has brought forward, must be the ground on which his claim to the attention of the public must be principally estimated.

There are three leading points, on which his opposition (for such it decidedly must be called) to the cow-pox chiefly rests: namely, 1st, the ‘ confused, uncertain, and contradictory states [*statements?*] of the principal phenomena of the disease;’ (p. 19;) 2dly, the want of analogy on the part of the cow-pox in several respects; and, 3dly, the evidence, which he has now acquired, that the preventive powers of the latter, though ‘ *nearly perfect immediately after vaccination,*’ are temporary only. He has made no such arrangement, indeed; but to these three points all his statements tend.

With respect to the contradictions, that are alleged to exist among the different writers in favour of vaccination; some of them appear to arise from the representations, which Mr. Brown has given of their opinions; some are merely the result of the different constitutions of mind, which invariably lead to different views of the same facts, on every subject of human inquiry; and none of them, if they were proved to exist, even to the extent affirmed by Mr. Brown, invalidate the general truth of the doctrine, as he sophistically infers.

In recounting Dr. Jenner's statements of the circumstances belonging to the cow-pox, he employs terms, which convey a very different impression from that of Dr. Jenner's lan-

guage; and, as he has given *no references,* the reader may not easily detect the imposition. He says, that

'Upon inquiry *at* the different practitioners all round, he (Dr. J.) found, that from experience they did not consider the cow-pox *as affording any security against small-pox.*' p. 33.

But Dr. Jenner's words are these: the practitioners in the country around him 'all agreed in this sentiment, that the cow-pox was not to be relied upon *as a certain preventive of the small-pox.*'* Our author also represents Dr. Jenner as asserting, that 'he found, that there were *many* persons *who had gone through the genuine disease,* and still were subject to small-pox.' p. 34. Dr. J. in reality says,† 'there were not wanting instances to prove, that when the true cow-pox broke out among the cattle at a dairy, a person, who had milked an infected animal, and had thereby *apparently gone through the disease* in common with others, was liable to receive the small-pox afterwards.' But this, so far from being the result of his ultimate experience, as would be inferred from Mr. B.'s statement, was explained, by future observation, as the result of a change of the qualities of the vaccine virus at the advanced periods of the disease. In page 67, our author repeats the same assertions, in still more distorted language. He dwells much, and with great triumph, on the different opinions which have been adopted, respecting the origin of the virus from the grease of the horse, and the alleged changes which it undergoes.

'Here,' he exclaims, 'at the very outset, we meet with the most glaring uncertainty on a very important and fundamental point, and a principle started of such uncontroled and extensive application, as to be capable of defeating every species of proof that could possibly occur, inimical to the practice. Indeed,' he adds, with a sneer, 'so sensible do all vaccinists seem to be of the great delicacy of this part of the subject, that they seem, from *sympathy,* inclined to draw a veil over it, for the ultimate safety of the whole practice.' p. 64.

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* See 'Evidence at Large,' &c. p. 2. † Ibid. p. 3.

He is disposed to be facetious respecting the name; since, if the disease originated in *the grease*, 'it ought now to assume the title of the equine or *horse-pox;* and the name of cow-pox stands in the same predicament, as if it were to receive its name from the human species, or any other animal it was applied to by inoculation.' p. 63.

Another proof of that inconsistency, in the representations of Dr. Jenner himself, which furnishes our author with one of the grounds of his opposition, is the following:

'He (Dr. J.) describes, in one part of his work, *the appearances* upon inoculating those who have undergone vaccination, to be, in no instance, more than *a slight erysipelatous appearance* round the punctured point, attended with no elevation, or pustular *appearance*, and always to *disappear* in three or four days at farthest. In an after part of his work he allows, that a pustule *may be* produced by such inoculation, and that, too, capable of communicating small-pox to another; but that no constitutional affection *was* produced in the person who had been inoculated after vaccination.' p. 39.

Now, so far from involving an inconsistency, this paragraph *(mutatis mutandis)* presents a correct account of the phenomena observed upon the re-inoculation of small-pox, or upon inoculation after small-pox has occurred in the casual way. This very circumstance affords an analogy, the existence of which Mr. B. denies throughout, between the two diseases. For it is well known, that, although in numerous instances no effect, except, perhaps, a little redness, follows the puncture, when the virus of small-pox is introduced a second time; yet not unfrequently a pustule is produced, possessing all the characteristics of the variolous eruption, and containing matter by which the small-pox may be propagated. Mr. Brown, indeed, asserts, that '*neither in* inoculation after small-pox, *nor* even for some time after vaccination, *or in* re-vaccination itself within a certain period, we *cannot* produce the smallest approach to a pustule or vesicle.'* p. 261—also p. 78. But this is directly contrary

* We content ourselves, at present, with marking the incorrectness of Mr. B.'s language by means of Italics, in order to avoid any interruption to

to the authority of the first observers in the profession;* and is also effectually confuted by the practice, which some inoculators have adopted, of keeping up a supply of matter for their professional purposes, during the absence of the epidemic disease, by producing a succession of pustules on their own arms. The Surgeons of the Edinburgh Vaccine Institution state this fact from their own knowledge, and we have received the same information upon other unquestionable authority. It has occurred to the observation of every practitioner, that variolous pustules are often produced, even for an indefinite number of times, upon the breasts of women giving suck to children labouring under small-pox. Mr. Moore mentions a lady, in whom such pustules appeared at six successive periods, during the inoculation of her children.† Yet, in such cases, the virus is applied externally to the sound cuticle only.

Our author lays much stress, also, on the alleged difficulty of ascertaining whether complete security has been effected, from the phenomena of the vesicle and areola: in this respect, he says, small-pox and cow-pox stand precisely on the same foundation; and these local appearances, therefore, must be considered as decisive of the full constitutional influence having been accomplished in the one disease, as in the other.

'It was well known to those who had any experience in the practice of (variolous) inoculation, that every variation of the pustule and areola *were* [was] still capable of producing the constitutional influence. You might have every variety already noticed, as occurring in vaccination, and still the constitutional disease imparted in its greatest perfection. The areola was here (in small-pox) looked upon as the decisive test of *its* influencing the system, and as a proof of the perfect satisfaction that existed, no body ever dreamed of re-inoculation where the pustule and areola were obtained.' p. 235.

It is singular enough, that by the circumstances of a case, related by Mr. Brown himself, for the purpose of shewing

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the argument; particularly as scarcely two passages together can be found void of some gross breach of the most common rules of grammar and syntax.

* See Willan on Vaccination, p. 15. † Reply to the Antivaccinists.

the proportional diminution of the vaccine influence with the increase of time from the period of vaccination, the correctness of this assertion seems to be invalidated. S. C. was vaccinated in February 1800, and inoculated with variolous matter in the following June. 'On the fourth day the arm was a little inflamed round the puncture; fifth day, the inflammation a little increased; sixth, *the inflammation still increasing*, and *a small quantity of pus formed*; seventh day, inflammation decreasing; *ninth* day, inflammation *nearly* gone.' p. 303, note. Yet in the January following, this child had a mild distinct small-pox from casual infection.

Very decisive evidence, however, in confutation of Mr. Brown's assertion, is on record, if this should not be admitted by Mr. B. The cases described by Mr. Dawson, of Sedbergh, in 1785,* are demonstrative of the insufficiency of the appearances of a pustule and areola, as a test of the security afforded by variolous inoculation. In two children inoculated by Mr. Dawson these phenomena occurred; the areola on the 8th day 'extending nearly to the breadth of half a crown.' From the matter of these pustules, Mr. D. inoculated nineteen persons, and 'every one of these had a fever, and an eruption of pustules at a proper time.' But the two children did not sicken; and on a subsequent inoculation, they 'had a smart fever for three days, and then an eruption of a considerable number of variolous pustules. The ignorance of this fact,' Mr. Dawson adds, 'has sometimes brought a discredit on inoculation. For I know, that there have been some instances, where the inoculator, from the *appearance* upon the arm *only*, has pronounced his patients safe from any future attack of the small-pox; and yet, some years afterwards, they have taken that disease in the natural way.'

But we have evidence of the uncertainty of still more complete appearances of the successful result of inoculation, in *eight* cases, related by Mr. Kite, of Gravesend;† in six of

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* See Medical Transactions, by the Coll. of Physicians, London, Vol. III. Art. XXV.

† See Memoirs of the Med. Soc. of London, Vol. IV. Art. X.

which not only a pustule and areola were produced on the arm, but some imperfect pustules appeared on other parts of the body; nevertheless, these patients received the small-pox, at a subsequent period, which went through the regular course.

It appears to us, therefore, that Mr. Brown has altogether failed in his attempts to prove Dr. Jenner, and the advocates of vaccination, guilty of inconsistency in their statements, and to shew, that, while the phenomena of inoculated small-pox are invariable and not to be mistaken, those attendant on vaccination are liable to the utmost uncertainty. The appearances of inconsistency, which he has made out, arise from the confusion of his own immethodical arrangements; from the repetition of the assertions of others, without attending to their language, and with variations of the language at every repetition; and from confounding hypothetical suggestions with the representations of fact: not to mention, that he puts several assertions into the mouths of the supporters of vaccination, which we believe they never uttered;* but as he makes no references, of course we cannot directly bring him face to face with those whom he has grossly misrepresented. This last-mentioned artifice directly confutes all his pretensions to candour, and can have originated only in a resolution to make an impression on the public mind, in accomplishing which, the nature of his evidence was a secondary consideration:—'rem, si possis rectè; si non, quocunque modo rem.' But it remains for us to notice the cases, which Mr. Brown has related, after premising that he admits the preventive power of the cow-pox to be nearly perfect, immediately after it has been gone through; but contends, that about three years after vaccination, its influence, though much diminished, still 'exerts a considerable effect in *mitigating* the disease' (small-pox); and that at the distance of

* For example, can Mr. B. point out to us the author of the following assertion? It is even asserted, that genuine virus may be converted into spurious, and *spurious matter may be converted into genuine*, and give the perfect vaccination.

five or six years, it hardly imparts any security, or produces any mitigation of the subsequent small-pox. p. 244.

The author divides his cases under three heads: 1, those in which casual small-pox succeeded to vaccination; 2, those which were the result of inoculation after vaccination; and, 3, those in which the concurrence of the two diseases is described. These cases, amounting, as the author has represented them, to sixty-four in number, and extended over seventy pages, present a formidable spectacle to the superficial view of the reader. Like a skilful general, Mr. B. has so marshalled his phalanx, as to impress the enemy with the notion of strength which he does not possess. For, of this number of patients, SIXTEEN at least *never had any eruption of pustules;* some are said to have had a slight degree of indisposition, and others *a rash!* but the symptoms of small-pox were certainly absent in the cases numbered IV, XVI, XVII, XXV, XXX, and XLV, and in all the 12 cases of inoculation, subsequent to vaccination, except the I, and XI; in the former of which, 'an eruption of about a dozen *or two* of inflamed, elevated, *points* were observed—they only remained out *three days*, and then *disappeared;* there was a rash previous to the eruption;' p. 200; and in the latter, (nearly *eight years* after the vaccination,) 'the body was now covered all over with a *measly rash*, and a dozen and a half of distinct pustules could be counted on the body.' p. 210. The *four* 'cases of small-pox conjoined with vaccination,' appear to us to prove nothing. The first is that of a child, who was vaccinated; but on the 9th day, when the vesicle was, 'from the mother's account,' in perfection, the child sickened, and died of confluent small-pox. Can there be a doubt, that the child was either inoculated with small-pox, or had been infected previous to the vaccination? In the other three cases, the children were vaccinated in one arm, and variolated in the other, by Mr. Brown; the two pustules proceeded in the same course, for some days very much resembling each other, the vaccine pock appearing to be rather more advanced than the variolous in two of the cases, the variolous more than the vaccine in the third, some indisposition occurred in all, and a few *dozens* of pustules appeared.

Mr. Brown admits that the preventive influence of the cow-pox remains for some time *nearly perfect*. The first 30 or 40 patients, whom he vaccinated, he also inoculated with small-pox virus, a few weeks or months afterwards; but, finding that they all resisted the influence of the poison, he desisted. Let us see, then, how successful he is in proving that this preventive influence decreases *in proportion* to the time elapsed after vaccination, being much diminished after *three* years, and altogether lost after *five* or *six*. Upon a comparison of his own cases with each other, we can scarcely discover the shadow of any evidence in support of this assertion. This evidence, on the contrary, tends to confirm the observation made by Dr. Willan and others, that these generally slight, accuminated, horny eruptions of small-pox, which have occurred after vaccination, have been observed, from the distance of a few months up to several years from the time of the operation. Thus, in case XIV, the vaccination had been performed but three months, yet a few pustules (and a rash) appeared: in case XVI, in which vaccination had been effected nearly *eight years* before, no eruption took place: and in case XVII, upwards of *five* years after vaccination, only a rash appeared: not to mention, that in the family in which case XLVI happened, two children, vaccinated at the distance of *eight* and *six* years respectively, escaped the contagion, though the small-pox was also epidemic. In cases XL and XLI, the children underwent an eruption of imperfect pustules, fading equally without maturation in both; yet the one was vaccinated *four* years before, the other not *two*. Besides the cases, which, whether exhibiting any eruption or not, are numbered among the instances of small-pox, there are *sixteen* patients casually noticed, as belonging to the families in which those cases occurred, who had been vaccinated at various periods, *from half a year* to *eight years*, who suffered no complaint. See cases I, VII, VIII, IX, XXII, XXIII, XXXI, XXXVII, and XLVI.

The surgeons of the Edinburgh Vaccine Institution, who drew up and published a Report upon this subject, at the re-

quest of the Managers, have taken a similar view of Mr. Brown's cases. They justly remark, that, in eleven of the twelve cases of inoculation, he produced nothing more than the *local* pustule, such as may be produced on any one, either after the vaccine or variolous disease, by inoculation, or by close contact, as in nurses; and they dismiss contemptuously Mr. Brown's absurdity of setting down rashes, pimples, &c. and cases in which there was *no eruption at all*, as examples of small-pox after vaccination. They state, besides, some evidence obtained by the personal inquiries of two or three respectable surgeons of Edinburgh, from which it appears, that the parents generally compared the eruptions to the *nirles* or chicken-pox; that, in case xv, a medical gentleman had pronounced the eruption to be chicken-pox; and, that Dr. Farquharson and Mr. Gillespie attended many cases of that disease, in those who had undergone both small and cow-pox, in the neighbourhood and at the time in which several of Mr. Brown's alleged cases occurred. The Reporters have, likewise, quoted several passages, in which Mr. Brown has certainly conveyed a different meaning from that intended by the writers whom he quotes; whether intentionally or not, we cannot determine, but surely most unpardonably: for, in a matter so deeply affecting the interests of society, inaccuracy itself is criminality, where correctnéss is within the reach of a little ordinary attention.

Mr. Brown has published a Reply to the Report of the surgeons, in which he accuses them of 'coming forward with a rapidity, levity, and rancour, of which nothing in the history of medicine, vaccination excepted, can afford any example:' a charge, which appears to us in a great measure unfounded, and which comes with an ill grace from the writer of this Reply: but, we are sorry to acknowledge, that there are some symptoms of irritability in that Report, which add nothing to the strength or dignity of the cause. No new facts are added in Mr. Brown's Reply; and from a series of repetitions from his former publication, of unsupported assertions, and of angry reasoning, we only learn, that he is

actually ‘ as violent and unreasonable a partisan, as any of his brethren;’ which, from the studied coolness of his original volume, we might not have ascertained.

Mr. Brown has published, in an Appendix to his Reply, the answers of those, or some of those, who replied to a circular letter, containing a few queries, which he addressed ‘ to a *variety* of medical practitioners.’ These are from three practitioners at Dunbar, one at Dunkeld, two at Lauder, and one at Haddington. Mr. Johnston, of Dunbar, mentions two cases of small-pox after vaccination, at the distance of 6 and 7 years from the operation: in the former of these, the pustules were numerous and distinct; in the latter, there was ‘ an eruption, which resembled small-pox, containing very little virus, and decayed on the 5th day.’ Mr. Turnbull, of the same place, had seen three cases of small-pox succeed to vaccination; but of the vaccination he has no knowledge, and he mentions no particulars respecting the sort of small-pox: he adds,

‘ Although the small-pox have been epidemic three different times within the last five years, and have continued for five months just now, (Sept. 1809,) I have only met with one case, (in addition to the other three,) that had some resemblance to small-pox, after cow-pox; this was merely a slight eruption, *without any fever;* the boy *slept with his brother, who died of confluent small-pox.* It is five years since this case underwent vaccination.’

Mr. Turnbull ‘ could not observe any difference of the number of the pustules, either from the proportion of their age, or the distance of the period from vaccination.’ Dr. Wightman, of the same place, says, that he has ‘ seen in all ten cases of small-pox, or an eruption resembling small-pox, succeeding vaccination,’ which he believes to be the whole that have occurred in the neighbourhood. Four were the result of variolous inoculation, the rest of casual infection; but in only *one* of these cases was there an eruption of numerous and distinct pustules, going regularly on to maturation. In the other cases the pustules were few, decaying about the fifth day, and in a day or two more totally disappearing. Dr. W. observed no difference in the severity of the disease

from the longer or shorter period after vaccination at which it occurred. Now, if we recollect, that small-pox had been three times epidemic at Dunbar, within five years; and that the vaccination, in numerous instances, having been begun in 1800, must have been of *eight* years' standing, when these gentlemen wrote; we see little evidence to support Mr. Brown's doctrine of the gradual decline of the influence of cow-pox on the constitution, but much in proof of its unceasing and unfailing power.

Mr. Minto, of Dunkeld, had witnessed no failure, but mentions some cases of chicken-pox, which were by some considered as small-pox, 'but it attacked children who had been inoculated for the small-pox, as well as those who had been vaccinated.' At Lauder, some unlucky mistakes were made by Mr. Williams, who vaccinated with matter taken on the *fifteenth* day, the vesicle having also been robbed of its virus by Mr. Johnston on the eighth: these patients generally took the small-pox afterwards. Mr. Johnston states, that fifty-two have resisted every exposure to contagion, at various periods of vaccination, and that six have had a subsequent small-pox, one of whom died; but of the evidence of the vaccination, or the nature of the small-pox, he says nothing. Mr. Dawson, of the same place, has seen no failures in those vaccinated by himself. In allowing that he has seen several apparent cases lately, he adds, that he has no knowledge with respect to the perfection of the previous vaccination, which had been performed by practitioners, and in some cases by clergymen, with whom he had no correspondence.

Mr. Welsh, of Haddington, says, 'I have not heard of an instance of small-pox succeeding to vaccination conducted by myself. Nor have I seen any disease following vaccination, which bears any resemblance to small-pox, except chicken-pox.'

We have thus endeavoured to put our readers in possession of all the facts, which have been brought forward by Mr. Brown, and which bear directly upon the credit and stability of vaccination. It must be obvious, we apprehend, from a

review of these facts, that Mr. Brown's leading proposition, the temporary influence of cow-pox, and the gradual and proportional diminution of its power, from the period of three to that of five or of six years, when it is totally lost, is unsupported by any part of his evidence. There are, at this moment, many thousands of persons, who were vaccinated from seven to ten years ago, who have resisted and still resist the infection of epidemic small-pox. We cannot but lament, indeed, that so many partial exceptions to the general rule occur; that, however mitigated and imperfect the small-pox, thus excited, are, so many instances should have happened: but we must aver, that no ingenuous, rational, and disinterested person will immediately deduce the inference, which Mr. Brown has seized upon, even after admitting all his premises, and affirm, that nothing remains for us but to relinquish this hazardous practice, pregnant with anxiety and distress to the country, and to recur at once to variolous inoculation. Mr. B. admits, that, for the space of three years, the cow-pox either *prevents* or *mitigates the small-pox:* even supposing, then, that the same power of prevention or mitigation should not be permanent, (of which we *cannot* have any proof, and which we see no reason to expect,) and that after 5 years all its influence should be lost, would it not still be an *invaluable possession,* as a means of *ensuring a mild small-pox?* We particularly recommend this suggestion to the Moseleys, Birches, &c.; as they would then *double* their practice and their fees, by inoculating the infant with vaccine virus, and the child of three years old with variolous matter; an expedient which, we are confident, would reconcile them even to ox-faces, cow-pox-itch, and all the 'nova febrium cohors,' the monstrous and unheard of diseases which they assert that vaccination brings forth.

We have not left ourselves space enough to enter into any detail of the copious and valuable matter, which Mr. Bryce has added, by way of Appendix, to the second edition of his very able treatise on vaccination. In its present state, we consider it as affording the most complete view of the subject, as well in an historical, as in a practical light. The

plan, which he has proposed, for rendering vaccine inoculation general and effectual throughout the British Empire, and for extinguishing the contagion of small-pox, deserves the most serious attention. His observations in refutation of Dr. Adams's reasonings, in regard to the identity of the vaccine and variolous disease, are sound and ingenious; (No. VI.) and other collateral questions are discussed with equal good sense.

We wish we could have conscientiously bestowed a portion of praise upon the pamphlet of a foreign physician, who has undertaken to instruct us, as well as his countrymen, upon the subject of vaccination. But Dr. Carneiro's pamphlets are not merely such as 'make the judicious grieve;' they are calculated to excite the utmost contempt of all who hold the qualities of candour, purity of intention, and the love of truth, in their esteem; and we fear, that were we to employ terms sufficiently strong to express our feelings respecting these productions, we might be accused of being very coarse in our censure. These pamphlets, of which the English edition differs little from the Portuguese, contain indeed such copious proofs of the extreme ignorance of the author, that numerous assertions, which could otherwise be attributed only to wilful violations of truth, may probably be placed to the score of the former. This, however, is rather an awkward dilemma for one who sets up for a public instructor. We would willingly dismiss Dr. Carneiro without farther notice; but, in justice, we must substantiate our charge. Dr. C. tells us, that

'It is a *law of custom*, and an established fact, that *all febrile diseases which attack the system violently, render it unsusceptible of a second attack*, which is the reason why a person who has once had the *typhus*, the *plague*, the small-pox, the hooping-cough, &c. lives afterwards in the middle of these diseases without being affected.' p. 39, *note*.

He tells us, too, that 'Dr. Jenner *has been* in Gloucestershire, where he gave too much credit to the assertions of the country people there;' p. 28. and that 'Dimsdale says, that in 46 years of practice, he never lost one from inocula-

tion,' and 'Sutton and his assistants inoculated in Europe, America, and the Indies, nearly half a million of persons, without the loss of one.' p. 14. These assertions may, perhaps, be the result of ignorance; but the following can only be denominated falsehood:

'Although it was in England, the country from whence arose this extravagant and abominable practice, yet, to do justice to the reasonable part of the faculty, *they never consented or concorded with such extravagance!*' p. 48.

We are then informed, that nature cries out 'in the altered and disfigured physiognomies, by the hands of rash men;' and that we are doomed 'to see every moment the alteration which the human species has suffered!' p. 62. And in addition to these ignorant and false asseverations, we are presented with such insufferable nonsense as the following, by way of *argument:*

'What should the philosophy of induction and analogy learn mankind in similar cases? Perhaps to introduce a venom proceeding from an animal so different, and of so different a nature, elaborated and worked by organization and particular laws! Would it be reasonable? Would it have any foundation whatsoever in nature? Would a conjecture, not philosophical, substitute truths and facts? Would the well-known inoculation of the small-pox, and also its perfection for near a century, disappear, and give place to a *brutal inoculation?* Was not the small-pox a disease known always, even in ancient times? Was not this disease *much more proper to man?* &c. All this is truth, and taken from nature and *philosophy;* but mankind, *entrusted to himself, follows his volubility!*' p. 46. Portuguese edit. p. 56.

Such is the trash, such is the climax of absurdity, with which Dr. Heleodoro Jacinto de Araujo Carneiro, 'Physician to his Royal Highness the Prince Regent of Portugal, Knight of the Order of Christ, and charged by his Royal Highness to make a Course of Medical Voyages and observations through the different countries of Europe,' has presumed to insult the understandings of Englishmen! Such the falsehood and misrepresentation with which he deludes his countrymen, and his prince!—a prince, who to his many

misfortunes has to add that of the choice of such a medical envoy.—Dr. Carneiro's motto, as applicable to himself, is, indeed, selected with 'curious felicity:'

'Pauvres humains, combien tout est degénéré!'

We have only to add, that the whole of the promised account from Portugal and the Brazils, is contained in two or three letters, printed in an Appendix to the pamphlet, (p. 83, et seq.) in which the 'diabolical vaccine' and the 'beastly experiment' are arraigned in general terms *à la Carneiro*, and the son of the Duke of Lafoens is said to have died of '*cow-pox* FEVER!' And, lastly, that he has concluded the Portuguese edition with two pair of *corresponding* plates; viz. 1st pair, Dr. Rowley's child with blotches and ulcerations, opposed to *a cow* with the whole shoulder destitute of skin, and with ulcerations on the udder; (false and contemptible insinuation!) and 2d pair, Dr. Rowley's 'ox-faced boy,' exhibiting scrofula caricatured, opposite to *a pig* with swelled jaws, intended, no doubt, to alarm the '*swinish* multitude.'

The Letter of Mr. Brice, of Sherborne, to Dr. Pew, may be deemed a sort of *critical* excretion of peccant humour, engendered by the petty jealousies of a country town. Its personality renders it unworthy of our attention, especially as the principal facts brought forward, consist of three or four cases republished from the Medical and Chirurgical Review of 1807.

Dr. Smith's 'Plain Statement' is a compilation from the Reports of the Colleges of Medicine and Surgery, the writings of Dr. Willan and others, the evidence laid before parliament, &c.; but without any perspicuity of arrangement, or neatness of style to recommend it.

The Cheap Tract of Dr. Thomson, of Halifax, appears to be well calculated to fulfil his intention of rendering the whole subject plain to the understandings of the lower orders of the people. He has condensed the result of considerable reading into small compass, in a simple and unostentatious manner, and expressed it in terms, which 'he

that runs may read,' and which are calculated to impress the minds of those unaccustomed to the exercise of thinking. His contrasted delineation of cow-pox and of confluent small-pox, well exemplifies this remark, and evinces a considerable acuteness of observation; and his refutation of the sophistical doctrine, 'post hoc, ergo propter hoc,' which the ante-vaccinists have constantly employed, is thus happily stated. Having mentioned, that children, about the usual period of inoculation, are subject to various complaints, from teething, worms, &c. he says, 'because they may *follow* the cow-pox, they are not *produced* by the cow-pox. Winter follows autumn; but the frost, snow, and cold of January, are not produced by the sunshine of August.' p. 14. We hope that this excellent little pamphlet will meet with the attention it deserves; and we conceive that an extensive circulation of it would be productive of essential benefit to the country. Perhaps the National Vaccine Establishment could not more effectually fulfil the purposes of its institution, than by adopting this tract, and giving it that general distribution, which a national establishment can most certainly effect.

Anxious as we are, in common with every friend of mankind, to see what at present appears to us the most valuable of human discoveries attested by the experience of every succeeding year, we should deem it unjustifiable to press such a recommendation as that which we have just made, or to be in any degree instrumental in the farther propagation of the practice in question, if we conceived that the evidence, upon which its efficiency and value rest, were invalidated by the occurrences and representations which the past year has brought forth. We trust, that we shall never have occasion to accuse ourselves of endeavouring to prop a tottering cause, by recommending specious descriptions and plausible appeals to the ignorance and weakness of the world. The subject appears to us to be stationary at present, but upon high ground, waiting only the lapse of time, which must either fulfil the predictions of those, who denounce the cow-pox as possessing only a temporary influence, or confirm the expectations of the majority, who

conceive that the experience of the past justifies the anticipation of its future permanency. Every sincere philanthropist, indeed, must regret that the general rule is not so completely devoid of exceptions, as it was in the outset believed to be: but while the modified and mitigated cases of small-pox, (admitting, for a moment, all that has been asserted on the subject,) which constitute these exceptions, by this very mitigation evince the antivariolous influence of the vaccine disease; the immense majority of instances, in which the complete effect of that influence remains unimpaired in the midst of variolous contagion, and the almost, if not absolutely, total absence of fatality in the exceptions above alluded to, still confirm our former conviction of the efficacy and future stability of vaccination.

We intended to have subjoined some contravening evidence, which has reached us, in the balance against that adduced by Mr. Brown, especially a Report from the Foundling Hospital of Dublin; from which it appears, that a re-inoculation of patients, vaccinated upwards of *eight years* ago, and inoculated unsuccessfully at the end of three years, has again failed to produce the small-pox; and an inoculation of others, vaccinated upwards of *seven years* ago, has been attended with the same result. The length of this article, however, prevents us from detailing the particulars of these experiments, as well as from adducing other facts which have come within our personal knowledge.

ART. XXXIX. *A Letter on the Study of Medicine, and on the Medical Character, addressed to a Student.* By Peter Reid, M. D. 8vo. pp. 59. Murray. Printed at Edinburgh.

THIS letter, as the title-page indicates, consists of two parts: the former, on the study of medicine, comprises about 40 pages;—the latter, on the medical character, occupies the remainder, consisting of nearly 20 pages. Our general opinion of the whole performance may be summed up in a few

words. The former part contains many very pertinent and judicious observations, but it is too short: the latter part is written with much less judgment; is not nearly so well calculated to benefit the medical student; and it is too long. A brief and rapid sketch of the contents will put our readers in possession of the grounds on which our opinion is formed; and a few extracts will enable them to perceive the distinguishing merits, as well as the besetting sins of this performance.

After some general remarks that bear the stamp of strong sense, and are conveyed, warm from the mind, in impressive language, but which, in our opinion, lie at too great a distance from the immediate and professed object of our author, and occupy a disproportionate share of this small pamphlet; Dr. Reid proceeds to relieve the medical student from the dismay and apprehension, with which 'the overwhelming mass of matter which is introduced to his notice, and the innumerable books which he thinks himself bound to consult,' are apt to inspire him. He cautions him against allowing the subordinate and auxiliary sciences of anatomy, chemistry, physiology, and botany, to occupy his attention and time, so as to exclude, or to postpone and narrow, his acquaintance with medicine. The author's turn for humourous and sarcastic caricature breaks out here, in a passage, which, if it had been written in rather a more chastened and condensed style, would have deserved higher praise, and better served the purpose of guarding the young student against indulging in the petty and useless niceties of these sciences.

The following observations on attending lectures are extremely judicious, and exhibit a fair specimen of our author's manner and style.

'There are many students who deceive themselves most egregiously in their attendance on lectures. They are occupied in a continued round of classes, where one object thrusts out another in endless succession, and a medley of demonstrations, experiments, facts, observations, theories, and hypotheses; this man's opinion, and that man's opinion, fleet through the mind without leaving any trace behind, or

breed such an uproar in the understanding, as confounds all judgment and reflection; just as if the mind was to be valued, like a sieve, not for what it retained, but for what passed through it. Hence, when they find that it is impossible to retain one-hundredth part of what they hear, or to meditate upon and digest one-hundredth part of what they retain, they devolve the duties of the head on the fingers, and think, that as they fill their note-books, they are improving their understanding. Hence, it is no uncommon thing to find, that a student, after several years of indefatigable scrawling, has been only blotting so much paper, while his mind remains yet a *tabula rasa*. There is no doubt, that notes judiciously taken have their use, as they often serve to fix what otherwise could not be recalled. In the mean time, they suspend every useful faculty of the mind; and if they are not soon fixed in the judgment, they accumulate to such a mass as frightens the student from reviewing them, and they are likely to remain as lumber ever afterwards. It is true, they are often very elegantly bound, fill a very prominent part of his library, and convince his mother and sisters of the wonderful progress he must have made in his studies.' p. 29.

The advantages and disadvantages of medical societies next claim the attention of Dr. R. We are rather inclined to think, that he over-rates the former, while he either does not enumerate, or does not give due weight to all the latter. That these societies might become extremely useful, if they were under proper regulations, we do not deny; but there seems something either inherent in their very nature and constitution, or unavoidably resulting from the members of which they must necessarily be composed, which bids defiance to the enforcement and operation of such regulations. This, at least, we think we may venture to assert; that such of our readers as have been members of these societies, if they reflect on the change which they have produced on their own minds and character, will be as likely to detect 'a propensity to speechify, a love of disputation, hunting after cavils, and that strife of tongues where the whole contention is for victory rather than for truth,' as any of the beneficial changes which are usually supposed to be derived from that source.

As Dr. Reid acknowledges, that ' in medicine the days for manufacturing systems seem now past,' it was scarcely necessary for him to have dwelt so long, and with such emphasis, on the folly and evil consequences of ' system-spinning.' His remarks on the opposite extreme of empiricism are much better timed; and cannot be too strongly or frequently impressed on the memory and understanding of the medical student.—We have not room for all his observations on this subject; but the following we must admit:

' Indeed, there is some danger lest the futility of most medical hypotheses should drive men into an opposite extreme, and so much discourage all reasoning on medical subjects, as to lead into a blind adoption of empiricism. Hence, an eternal torrent of facts, cases, and experiments, without any general result, would sweep away all true science, and condemn us to grope in the dark, the *mera palpatio*, without any directing principle or useful conclusion. This temper is well calculated to gratify incapacity with a shew of activity and zeal, without the fatigue of thinking; so that the merest driveller in the trade often takes himself for a Heberden, has his port-folio full of all the mighty nothings that have come under his own observation, and threatens, as soon as he can command leisure, to write a great book, and favour the world with the result of his own experience.

' It is a gross ignorance of the real nature of medical experience, and of the qualities necessary to constitute a solid medical observer, that makes the press teem with such swarms of still-born crudities on these subjects. They never consider the immense difference between an accurate observation of the uniform appearances of dead matter, and of the phenomena of the animal body: in this field, however, there are many who have eyes, and they see not, ears have they, and they hear not; plainly, because neither eyes nor ears are adequate to ascertain the causes and effects of the complex movements of the animal body, without a certain portion of brains, habits of solid reasoning, and much preliminary instruction. It behoves you, therefore, to have a clear notion of what is really entitled to the name of experience in medicine, and to be aware of those difficulties which every moment perplex a sound observer, make him diffident of his conclusions, and reluctant about drawing general inferences from particular facts. You must understand distinctly, how much more puzzling and uncertain our experiments on the human body are, than those on

dead matter, and be fully apprised of the thousand hidden springs that are continually at work, defeating their result. For the body on which we experiment is not of a passive nature, but subject to change from innumerable intestine motions, never for a moment in the same state, and always acted upon by a variety of causes, whose subtilty may escape our notice, whose influence it is difficult to appreciate, but which, if not taken into the account, render all our experience nugatory.' p. 36, et seq.

The qualities of mind most useful to a medical man are thus summed up, in a passage which we may fairly quote as a specimen of our author's best manner, and as indicating in no common degree, an acute and sound understanding, acting on intimate knowledge of what his profession requires, and expressing itself in language of suitable precision and vigour.

'From what has been said above it will appear, that the qualities of mind most useful to a medical man, in a professional point of view, are rather solid than dazzling, such as gain confidence on acquaintance, than such as attract notice at first sight. We expect in him rather a soundness of judgment than a subtilty of reasoning; a strength of observation, and sagacity of remark, rather than a vivacity of fancy, and nicety of sentiment; that power which perceives, with readiness and precision, all that is interesting in the objects of its contemplation, can either pursue a fact, or apply a principle; a strong sense, that is not easily entangled, but seizes readily the force of an argument, and adopts the right course without perplexing itself with multiplied expedients; a hardihood which can persevere in present labour for remote consequences, and steadily pursue its object through a long tract of investigation; such an intimate acquaintance with the resources of his art, as gives him an habitual dexterity in applying them, a general soundness and comprehension of mind, so completely aware of the strength and weakness of medicine, that he easily separates what has the sanction of solid experience, or fair speculation, from the ravings of absurdity or presumption.' p. 40.

Hitherto, this Letter has betrayed only short and occasional glimpses of Dr. Reid's peculiar turn of humour. In the subsequent pages, on the medical character, this humour bursts forth without restraint. Our author evidently has

a thorough contempt for all the tricks of his profession;—such a decided attachment to what is solid and useful, as to make him despise whatever is merely superficial and showy;—and such an unbending uprightness of principle and character, as to fill him with indignation, whenever he perceives his medical brethren bowing the knee to Mammon. This disposition has betrayed him into caricatures, the features of which are so distorted, that they will not be recognised by the medical student, when he mingles with the world. The consequences will naturally be, that he will not be able to detect his own approach to any of those characters, against which it is our author's wish and object to guard him; and he will be apt to suspect the soundness and utility of Dr. Reid's advice respecting the conduct of his medical studies, when he finds out that the pictures he has drawn of the medical character are grossly overcharged.

The following passage will prove the justice of our censures, and probably create a surprise in the minds of our readers, similar to what we have experienced, on finding it so totally destitute of the judgment and taste, which the last quotation displayed:

'I knew a man who, by sucking his cheeks, made his patients believe that he was deeply immersed in cogitation, when, to my certain knowledge, he had walked about the earth in a continued state of somnambulism from his birth, his brain being as little worn with reflection as a new-born infant's; but nature had given him a most picturesque countenance. We were very near losing this worthy man about twenty years ago, as he was then threatened with a consumption, having a constant pain in his breast; this, however, was relieved by a copious expectoration of putrid matter, which was supposed to be his heart dissolved into *sanies*, as he never has had any pulsation in his breast since. Indeed, he was a man of most uncommon dispatch in business; like Cæsar, (who was likewise a great doctor,) he might have taken for his motto, *Veni, vidi, vici.*' p. 46.

If the remarks we have made should induce Dr. Reid to omit altogether, or essentially to alter the latter part of this letter, and to dwell more fully and minutely on the former part of it, we shall not think them made in vain; for if it

were offered to the world in that state, we should consider it our duty to recommend it as a most useful manual to every medical student.

ART. XL. *Observations on the Structure of Hospitals for the Treatment of Lunatics, and on the General Principles on which the Cure of Insanity may be most successfully conducted. To which is annexed, an Account of the Intended Establishment of a Lunatic Asylum at Edinburgh. Illustrated by five Engravings.* 4to. pp. 115. Constable and Co.

NOTWITHSTANDING the increase of the number of charitable institutions, and the improvements in their construction and management, which have been introduced through the exertions of benevolent individuals, we have still cause to regret, that their benefits should be so partially extended, and, in some cases, so materially checked by the defective system on which they are established. This country does, indeed, rank high among civilized nations, for the attention that is bestowed on the comforts of the poor and unfortunate: but, though we have given the example to Europe, it may be doubted, whether our humanity has always been well directed and applied, and whether the alms which have been appropriated by the state, or which have been contributed by private benevolence, for this purpose, may not, in many instances, have tended to multiply the evils they were meant to remedy. That this has been the effect of our poor-laws, and of charity work-houses, (those fell receptacles of idleness and vice, which they support,) no one, who has bestowed the least reflection on the subject, can dispute. By encouraging poverty, by holding out rewards for indolence and inactivity, they check the spirit of industry among the lower orders: by separating the labourer from his family and friends, and from all the consolations of domestic enjoyment; by associating him with those only who are depraved and abandoned; they break his independence of mind, vitiate his

morals, and deprive society of the advantage of his further exertions.

To asylums for the relief of the diseased these observations do not certainly apply in full force; though in them, too, the same disadvantages are sometimes perceivable, and the same evils are sometimes engendered. In general, however, they may be regarded as affording a greater quantum of assistance to the infirm poor, and as supplying them with more extended comforts in their sickness, than they could in any other way procure. Hospitals for the reception of the insane are particularly necessary, as serving not only to secure to their inmates the best possible treatment, but also to prevent the injuries they might do to others, if allowed to go free, and left to the suggestions of their distempered fancy. In accomplishing the latter object, however, the former has been too frequently overlooked: if the confinement was strict, little more was judged requisite; and the lunatic has been left to drag on a miserable existence in his cell, destitute of all medical aid, and having his malady often aggravated by the brutal harshness of his keeper. In some cases, too, his cure has been protracted by the injudicious construction of the asylum, by its want of accommodation, by its bad regulations, and by the impossibility of finding, within its limits, the means most conducive to recovery.

At a time when the progress of civilization and refinement has opened so many new channels for the industry of man, and given to his mind so many new impulses; it has become more than ever desirable to provide against the consequences that ensue, when his ideas assume a vicious direction. The increase of lunacy is equally alarming with that of consumption:* and it has become a duty not less incumbent on the statesman, than on the physician, to investigate minutely the causes of its growth, and to devise, if possible, the means of checking its ravages. If the number of insane persons in these kingdoms has been nearly tripled in the course of the last century, need it be wondered, that

* See A. M. R. Vol. I. p. 337.

the demand for lunatic asylums should be at present so urgent—need it be wondered, that complaints of their deficiency should be echoed from all corners of the country? How ill supplied Ireland is, we have already had occasion to shew: the papers now before us prove, that Scotland labours under the same want; and it appears truly unaccountable, that, when the bill for the erection of lunatic hospitals in England and Wales was under the consideration of parliament two years ago, no Irish or Scotch member should have come forward in his place, and insisted on the necessity of extending its provisions to the three kingdoms. It is equally unaccountable, that the executive branch of the government should not have seen the propriety of such a measure, and that they should have allowed a bill of so partial a nature to receive the legislative sanction. The expense of carrying such an enlarged bill into effect, could not well have been an objection. Half the cost of one of those ill-advised expeditions, which carried the flower of our army, to perish ingloriously on the plains of Estremadura, and to rot in the marshes of Zealand, would have done more than pay for the erection of a sufficient number of lunatic asylums, to serve for the whole of the imperial dominions.

While our governors are thus culpably negligent, it is some consolation to consider what may be accomplished by the efforts of private individuals in this important branch of medical police. The excellent institutions for the reception of the insane, which have been established at York, at Liverpool, at Manchester, and other towns, have demonstrated the utility of such a provision, and shewn, that, when properly regulated, the expense attendant on their support may be reduced within very narrow limits, if not altogether covered by the charges for admission and maintenance. To immense hospitals of any kind we are decidedly averse: they can never be so well superintended as hospitals on a small scale; abuses are more apt to creep into them, and their expense is consequently greater;* and, though the practitioner may

* At Paris, in the Hôtel Dieu, for example, the average maintenance of each patient costs twenty-seven sous per day; while in the Hospital of Vau-

find in them a more extensive field for observation, the patient is subject to much greater risk, from the accumulation of diseases introduced within their walls. We, therefore, agree entirely with the intelligent architect of the proposed lunatic asylum at Edinburgh, in thinking that the advantages to be derived from such an establishment will be most effectually secured, by forming it of a number of separate buildings, admitting of a division of the patients into different classes, according to the different degrees of disease, or the advances which they may have made towards recovery. Mr. Reid is of opinion, that not more than 40 patients should be allowed to live under one roof: by erecting the separate buildings in the form of a square, and having, besides, distinct dwellings at each corner, and three detached houses in the compartments of the adjoining garden, in which the keeper, too, is to be allowed to live, a great number of patients might still be collected within a small compass; enjoying all the advantages of a large lunatic hospital, without any of the peculiar inconveniences attendant on that indiscriminate mixture of patients of all ranks and conditions of life, and in all the different stages of insanity, which takes place in by far the greater number of such institutions.

As the present publication is made chiefly with the view of eliciting hints for the improvement of the plan, before it shall be put into execution, we will venture to point out one defect, which has struck us. It does not appear, either from the designs, or from the statements by which they are accompanied, that any provision is intended, for affording the more tractable class of patients an opportunity of exercising themselves in such mechanical and agricultural labours, as may best accord with their different habits of life. When we consider the beneficial effects that accrue from the steady occupation which is given to the mind, by well-directed cor-

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girard, it was only eighteen sous: the virulence and fatality of acute disorders, in the former, was proverbial; and the danger of important operations so extreme, that the surgeons no longer ventured to perform some of the most common. See 'Observations sur les Hopitaux,' par P. J. G. Cabanis.

poreal exertion; when we see the proud spirit of independence, which such employment never fails to excite; we can conceive nothing more likely to facilitate and accelerate the cure of those unfortunate persons to whom confinement has become necessary. The labours of the field and the garden recommend themselves, in particular, for adoption, by their simplicity,—by their cheapness, and the small injury that can be sustained, when they are improperly conducted,—by the habit of correct observation which they produce in those who follow them,—and by their salubrious and highly invigorating influence. Where they have been resorted to, as in the establishments at York, and at Saragossa, the most salutary consequences have resulted: and we make little doubt, that when a fuller trial shall have been given to them, they will be regarded as among the most efficient means of correcting the less violent and inveterate sorts of mania. If, therefore, our suggestions should not be deemed altogether unworthy of notice, it will afford us much satisfaction to see this addition to the plan carried into effect, in such manner as the Managers of the Edinburgh Lunatic Asylum may judge most advisable.

ART. XLI. *Annual Report of the Royal Humane Society.* 1809. London, Printed for the Society.

OF the various institutions which do honour to the inhabitants of this great metropolis, the Royal Humane Society must be regarded as one of the most philanthropic. Besides the actual number of individuals whom it has been instrumental in rescuing from untimely dissolution, it has tended to induce in the lowest orders of the people an active spirit of benevolence and humanity. For we must not conceal the truth, that whether we wish to secure a highwayman, apprehend a murderer, or save a poor wretch from self-destruction, we must offer a reward; and the humane society, by its premiums, by its honorary medallions, and by the other marks of distinction which it confers, has unquestionably elevated

the English character.—We therefore rejoice that its exertions continue to be successful, and that other similar institutions are established, in many of our large provincial towns, and also in various parts of Europe and America.

The present volume commences with a neat and just tribute to the memory of the late Dr. Hawes, to whom the society chiefly owed its origin. It then gives the usual directions for the recovery of drowned persons, and for the prevention of premature death. As these, however, must be quite familiar to most of our readers, we forbear repeating them. From the commencement of the institution, three thousand two hundred and fifteen instances of restoration from apparent death have occurred; and within the last year only, one hundred and eighteen. Of these, three cases are inserted; but they do not present any unusual phenomena, or require any comment: one drowned man very much resembles another, and we think the society has acted judiciously in not swelling the bulk of this volume with more cases.

The chief novelty in the present Report, is a plan for preserving the lives of shipwrecked persons, by Captain Manby. This gentleman had frequent opportunities of witnessing the distress which seamen suffer from bad weather, or violent storms, when relief cannot be afforded them from shore. After many experiments, he devised the means of throwing a rope over a vessel in distress, from a mortar on shore.

'This rope is secured from burning, by a sheath of leather, round the end introduced into the mortar with the ball. The experiment was made at Lowestoff, on the 25th of August and 10th of September, (1807) before many spectators, and several persons of the Suffolk Humane Society; and the opinion of the latter has been confirmed by the united testimony of many naval officers.'—'On both occasions it was unanimously resolved, "That in the opinion of the Suffolk Humane Society, as well as that of many other gentlemen present, Captain Manby's experiments for effecting a communication between the shore and a stranded vessel, made by throwing a shot, with a rope appended to it, over a vessel, if she be near land; or by a grapnel thrown from a mortar, by which a boat can be hauled over the surf, have completely answered the purpose for which they have been attempted."'

ART. XLII. *Facts and Observations on the Prevention, Causes, and Method of Treatment in Pulmonary Consumption.* By John Smyth, M. D. of Brasenose College, Oxford. 8vo. pp. 74. Longman and Co. Printed at Uttoxeter.

WE have been a good deal perplexed in determining to whom we shall assign the production of this silly pamphlet. We can scarcely suppose that it is, what it purports to be,—the work of a physician of the university of Oxford; and are rather disposed to consider it as a *hoax* upon the profession,—an attempt of some arch wag to *quiz* the physicians of watering-places, by caricaturing the advertising pamphlets which they too often publish, and to satirize the medical science of Oxford, by misrepresenting the acquirements of one of its graduates. The writer has, indeed, contrived to make an abundant display of ignorance both of the practice of medicine and of the nature of the animal economy; but at the same time he has little pretensions to humour, and therefore his satire, if such it be, will fail in its intended effects.

The introduction is dated from 'Matlock Bath,' the 'last resource' of the consumptive, who are generally 'in a hopeless state' when they go there, (p. 31,) and our author does not anticipate any success from his suggestions. (p. 3.) A number of paragraphs are huddled together, without order or connection, and are called 'preliminary data;' from which, however, nothing is attempted to be deduced. These are principally extracts from Girtanner on Irritability, and Saunders on Mineral Waters, interspersed with some *original* instruction, which possesses an universal fitness, or rather unfitness, for any practical use. The following passage includes the sum total of the information which our Oxonian Machaon dispenses to his readers respecting

'EMETICS *and* PURGATIVES.

'These remove the indigested and unassimilated contents of the stomach and bowels, and thereby remove morbid irritation. *This is as far as regards their operation,* in inflammatory complaints; but if we consider the *wonderful* influence which they have, in diseases of

the biliary organs, in the tussis stomachica, and in diseases of the mesenteric glands, and other scrophulous affections, *the power of emetics will take in a vast field.*' p. 11.

These are very luminous *data!* But we are farther told, that, ' Fever-juleps and Fever-powders ' are ' generally composed of substances which in themselves have *the power of lowering the temperature* of the body :' (p. 12)—that a fixed pain in the chest, which is increased on inspiration, ' most probably arises from *part* of the lungs *adhering to the pleura* PULMONALIS!' &c. (p. 64)—that the reason why consumptions succeed the measles more frequently than the small-pox, is ' because the measles are an affection of a continuation of *the very membrane which lines the lungs,* and they never rise above the *external skin,* which is an *additional covering* on the external parts of the body :' (p. 30, note)—and we are told of the dangerous inflammation of *mucous membranes,* such as the *pleura* and *peritoneum!* (p. 33 and 40.)

Such a specimen of anatomical science, if it were real, would place Oxonian anatomy on the same ground with the specimen of Oxonian Latin, exhibited by our critical brethren of Edinburgh; but this is obviously a libel upon a degree ' which hath accomplished all things for the grace.' There is an approximation to humour in the following *reasoning,* by which the injurious operation of bark, acids, and tincture of steel, in scrofulous affections, is sagaciously inferred from the similarity of *taste* in these medicines and in *acorns:* it may be considered as a tolerably fair caricature of medical hypotheses. The word scrofula, we are informed, is derived from scrofa, a sow; the ancients having remarked, that these animals were particularly subject to glandular enlargements, especially on their return from the woods, in autumn, in a fattened condition, ' and the mind was naturally led to ask the cause of this.'

' The reason was obvious, when they knew they could have obtained very little or no other food than acorns. As this was not quite clear and free from objections, because in that state other causes might produce that effect, for aught they could positively *prove,* it was in process of time determined to *prove* the fact by feeding these animals

on acorns in a domesticated state. The experiment *proved* the stability of their reasoning; and any one may *prove*, that by feeding these animals on this food, the *bacon* will be full of what are generally called kernels, which are enlarged indurated lymphatic glands.

'It may be easily anticipated what is meant to be inferred from hence; viz. whether acorns possess a property similar to oak bark; and whether oak bark resembles cinchona. I believe the application will hold good to a considerable extent, except that acorns are more astringent and austere than the bark; but the properties of acorns are frequently imitated by joining along with the cinchona the different mineral acids; and when the tinct. ferri muriati is used, the *similarity in taste is very great*,' &c. p. 45.

'The utility of the cinchona seems *therefore* to me, something more than problematical: as a constitutional remedy, I conceive it improper, when joined with the ingredients before mentioned, *for reasons just given;* as a febrifuge, it is certainly inapplicable, because the *hectic fever* is a *fever* sui generis, always *accompanied with* a greater or less degree of *fever*, and not returning with the periodical certainty of an intermittent, *whose* febrile state is only temporary.' p. 47.

It is true the author has seen great benefit from the use of cinchona in debilitated habits, bearing strong external marks of scrofula; 'but then it has been *joined with soda*, either in the form of an electuary, as prescribed by that very valuable little book, the Pharmacopœia Chirurgica, or in decoction,' &c.: and 'that alkalies are the remedies which we must rely upon as stimuli in the lymphatic system, has long been admitted.' Ibid. Yet it would seem, that, in consumption, the system is already fully impregnated with alkali, for we are presently informed, with considerable archness, that

'If, in consequence of the hectic fever, the patient should wish to drink a little *lemonade* or *apple-water*, these respective acids meeting with the alkali in the system, will form therewith *citrats* and *malats*, salts which are very soluble, and which will act as mild diuretics.' p. 68.

We shall content ourselves with one extract more, which seems to have been intended as a satire on the absurd and

frivolous distinctions, which some medical men affect to make between particular articles of food.

'The diet must be of that kind which is light, somewhat nutritious, and easy of digestion. To be consistent with ourselves *on the alkalescent system*, we may in the first place mention the white sea-fish, *e. g.* cod, haddock, skate, hollibut, soles, flounders, whitings, and fresh herrings; some of the shell-fish, such as crabs, cockles, oysters, prawns, periwinkles, and shrimps. *It may be observed, that turbot, with its general accompaniment lobsters, are* [is] *here omitted.* I would advise the invalid to refrain from gratifying himself in these dainties, until his health shall be much better than it is now supposed to be. Among the fresh water fish may be ranked pike, trout, grayling, crayfish, &c. *Carp and tench* are here omitted *for the same reason as turbot was.*' p. 65.

This satire on medical discrimination is the more severe, as *no reason* can be discovered. On another occasion, however, the reasons (which it must be presumed are ironical) for recommending a medicated wine, consisting of many ingredients, in *consumption*, are very numerous, and deduced from the variety of qualities in the respective ingredients. Thus, one is efficacious in pleurisy, and other inflammations; one has been little tried; another is beneficial in bowel complaints, in fluor albus, and uterine hæmorrhagy; another in dyspepsia; and, besides, books have been written upon it by two or three writers;—*hence* it is very obvious that the whole compound must be a cure for consumption! See p. 59.

Perhaps, however, our readers may be already yawning over this jumble of absurdity, (for it is possible they may so deem it,) and perhaps they may differ in opinion from us, and believe that verily there is such a personage, as is named in the title-page, and that this essay was written in sober sadness. We hope, for the honour of Oxford and of physic, that they are mistaken.

ART. XLIII. *A Treatise on Cheltenham Waters, and Bilious Diseases.* By Thomas Jameson, M. D. of the College of Physicians in London and Edinburgh, formerly Physician and Lecturer at the Finsbury Dispensary, London; now resident Physician at Cheltenham. Second Edition, newly arranged, with numerous Additions, and Two Plates. 8vo. pp. 219. Callow.

ACCUSTOMED to view the many forms in which the cupidity of man is constantly at work to promote his worldly interest, by giving him an ephemeral reputation, we confess ourselves not surprised that the trick of book-making is so frequently found amongst the number. Of all others, it is the most capable of imposing upon the ignorant and the credulous; and as these, from many causes, form the greatest portion of our race, on whom the experiment is tried, the result is commonly to a certain degree successful. Remote from the inquiries of the general observer, and favoured by the hopes and wishes of self-love in the hour of sickness and pain, our profession has ever been a prolific field to the cunning and avaricious; and, accordingly, we find it filled with a greater number of adventurers than other professions, trades, or callings.

Dr. Jameson appears to be, as usual on these occasions, an extraordinarily modest and well-behaved man. He informs us in the preface to his incomparable book, (which preface, however, has rather too much of the air of certain newspaper advertisements,) that Cheltenham is celebrated in the East and in the West Indies; that this celebrity arises chiefly from its springs, the waters of which are eminently efficient in the cure of most kinds of diseases, but particularly of the bilious class—under the author's immediate management. It seems he acquired this fortunate superiority over his brethren at Cheltenham, during a long residence in tropical climates. And so well-known is all this, that the author is induced to acquaint the public, that the former edition of this work was sold off some time past, a circumstance which has produced many solicitations for a new one.

Thus far every thing is sufficiently clear; at least none but dolts could misapprehend him. But is the gravity of

critics never to be disturbed? Are we always to be stiffened by the pride and glory of intellect; and never descend from our inquisitorial chair to join in the laugh of mortals, or bestow more than cool niggardly applause upon so conscientious an individual as Dr. Jameson? For surely he must have had in mind this repulsive and unbending temper of critics, when he so anxiously begs us to understand, that in writing this book 'he was completely unbiassed by any interested motives!'* But for this apology there was no occasion, as the book itself will undoubtedly prove.

This gentleman's preparatory labours are also deserving of praise, for we are assured that he bored no less than forty holes in the soil around Cheltenham in search of springs, although they were already so abundant as to be '*all over the country.*'

'These investigations prove that the wells of Cheltenham supply waters with one leading feature, although there is some variety of character in every one of them. They contain a larger proportion of Glauber's salts, than most other wells in the kingdom, which generally derive their cathartic properties from Epsom or sea salt. And they acquire a variety of other impregnations from the circumjacent soil containing different proportions of pyrites, sea salt, and animal spoils' anciently entombed in the valley by the waters of the boundless ocean. Hence are often found three different waters in the same well; briny at the bottom, sulphureous and chalybeate in the middle, and fresh at the top, according to the difference of specific gravity in the fluids,' &c. p. xvii.

The author is anxious his readers should remember, that, since his first publication on the waters, he has had much additional experience in bilious diseases, which has caused the chapter on that subject, in the present edition, to be much enlarged. And from this additional experience, he is more than ever induced strenuously to renew his cautions to the public, with respect to the indiscriminate use of calomel, James's powder, and Cheltenham water.†

But these cautions will be fruitless, from his having forgotten to particularize the cases, when they might be useful, the doses, &c. And we can point out no other mode by

* Preface, p. xvi. † Ibid. p. xx.

which the mistake can be rectified, but by the patients troubling Dr. Jameson himself with a personal interview. In this he appears to agree with us; for, after another warning, and another caution, we are informed, that

'His advice has saved many persons from fatal dropsy by preventing their drinking at the well when œdematous swellings appeared in the feet.' 'Prudence,' he says, 'requires that patients should always be directed before they drink the waters, whether they are to pursue the laxative and purging plan, and what kind of water is best suited to their case. And after they have drank them a certain time, it would be proper to ascertain with accuracy whether changes have not taken place, in their constitution, or their disease, to interdict the further use of the waters.' p. xxiv.

The work itself consists of eight chapters. In the first we are told,

'That the ocean is the original source of all waters; and fresh water is derived from it, not by filtration through the pores of the earth, but by evaporation in consequence of the action of the sun and air upon it:' that 'trees bring rain, and clearing a country from its wood permits the solar rays to exert their influence on the land,' &c.: that 'waters coming from considerable profundity, are apt to be mineralized: that streams of water, passing with great force in the interior of the earth, and sometimes making irruptions upon miners, depend upon the great law of Hydrostatics, which raises fluids to the level from whence they came, for the pressure of the air cannot be excluded from the interior of the earth, &c.' p. 4.

The different kinds of water then pass in review, as soft, sea, fresh, petrifying, thermal, and *mineral waters*. The impregnation of the latter with the gasses, salts, and metals. Then follow observations on the 'Diluting Principle,' or the watery menstruum of mineral waters, which is very sagaciously remarked to be common to all of them, and which is said to be perhaps 'the most important of all their properties, as well in a medical as in a physical point of view.' p. 21.

If the author means that waters are fluid, and, when pure, well calculated to answer the purposes of an wholesome drink, we agree with him. And indeed it appears, that he holds such an opinion. For it is here said, that

'Fifteen years ago he published a treatise on diluents, wherein he proved the salutary effects of simple waters, and the operation of the

fluid principle upon the human body. In that treatise it was observed, that, in the healthy state, liquids were necessary for the digestion of the aliment, and well calculated to lessen the effects of acrimonious matters in the stomach, to fit the chyle to pass the lacteals, to give fluidity and mildness to the blood, and to carry off its saline particles, by the different outlets of the body. In a diseased state they (the simple waters) rendered the small vessels permeable, promoted the secretions, and carried off every putrid and acrimonious principle, generated in the body, by diseased action of the vessels.' p. 23.

That treatise we never had the good fortune to read; and for this culpable neglect of our duties, we know not better how to apologize, than by again repeating our willing assent to the main scope of its doctrines, that pure water is indeed an important fluid, and 'numbers of facts might be adduced to prove this.' p. 21. Whether it ever carries off, or 'washes away,' acrimonious principles *generated* in the blood, we have the temerity to doubt; and must confess, that after having penetrated with our author to the very profundity of his lucubrations, we were still so dull and stupid, as to be utterly incapable of comprehending what he could mean by 'acrimonious principle, and the secretion of putrid substances.'

In the 3d section of this chapter, the author enumerates the advantages which invalids may enjoy at watering-places. They are as follows. *Change of air, exercise in the pure air, occasional relaxation of mind, regular habits of life, confidence in a remedy, &c.*

Chapter 2d describes the situation of the town of Cheltenham, which is excellent; the salubrity of the climate, which is also excellent; the longevity of the inhabitants, so remarkable, as to have induced the author to give the public a bill of mortality taken by him in the year 1807.

The 3d and 4th chapters contain an account of the soil in the neighbourhood of Cheltenham, the situation of the wells, and the properties of their waters. They are divided into the aperient-saline wells, the chalybeate-saline, the sulphurated-saline, and the simple carbonated and chalybeated wells.

Dr. J. recommends the spring and autumn as proper seasons for the employment of these waters, 'with a previous

preparation of the body by doses of calomel, with an interval between each.' He proscribes travelling in hot weather, and justly observes,

'That vascular commotion, once excited, may terminate in feverish habits, that will defeat the intended purposes of the water.' p. 99. 'Medicines intended to *operate in the circulation of the blood*, ought to be taken with a full meal; but water, which acts on the alimentary organs only, should be drunk on an empty stomach; and the use of it, at this time, is attended with a further advantage of the operation being finished before dinner.' p. 100.

We readily believe that 'large doses of these waters will sometimes swell the ancles;' though we cannot guess at the nature of certain restrictions, by which the author has been enabled to ward off the dangers sometimes attendant on a course of them. It is however presumed, that by a personal application to Dr. J. and the sum of £1. 1. in good money of this realm, this antidote for swelled ancles may be obtained.

In the list of diseases, which require a course of purging waters, we find an ample portion of the bilious class: bilious vomiting; bilious purging; biliary concretions; and female diseases, are not forgotten. The account of dyspepsia is very copious, and illustrated by much profound physiology.

'Stomach complaints are generally the creatures of our own formation, &c.' p. 113. 'The digestive organs do not permit any kind of alimentary matters to pass into the blood unchanged, except common salt into this transmutation, &c.' p. 114.

With the air of one pregnant with abilities, and who is impatient to be delivered of them, the author proceeds in this dignified and philosophical strain:

'*First of all,*' (speaking of digestion,) 'the gastric juice coagulates the liquid ingesta into a bland fluid; it is the same in the Bramin of India, who lives on vegetables,—the African, who feeds on fish,—and the Laplander, who eats nothing but rein-deer, &c.'—'*In the next place*, the bile and pancreatic fluid, are mixed with the liquid mass, to convert it into chyle, and to transmit it through the alimentary canal. Finally, it is united to lymph, &c.' p. 114.

The *profundity* of the next observation is not more remarkable than its truth.

'The stomach,' says Dr. Jameson, 'is a muscular bag, which suffers different degrees of distention, according to the quantity of its contents, &c.'

At page 117 it is said, that Cheltenham waters 'are of as much use in stomach complaints as in any disorders whatever.' At p. 124, the author changeth his opinion. 'Scrophulous affections of the skin, and glandular obstructions, are commonly accompanied with general debility and dyspeptic symptoms, and *therefore* do not require a purging plan, &c.' In gout and rheumatism, 'three or four doses of these waters, taken before the time the fits commence, will often carry the fire out of the body, and prevent the explosion taking place!!!' p. 125. *Quid rides?* Let it be known this is no laughing matter. What in nature can be so appalling, as a constant anticipation of being blown up, or burnt to a cinder? though it must be confessed there is much consolation from knowing that Cheltenham water will extinguish the fire. In a serious consideration of this subject, one difficulty has occurred to us, and which we shall do right to communicate to the public; viz. the impossibility, in many situations, of obtaining Cheltenham water, before the unhappy patient has probably been reduced to a mere oxide. The only substitute for it, is a vigorous use of the pump, which, in common forms of combustion, we know to be usually successful. And, indeed, as candour shall ever guide us, our confidence in the latter method is at least equal to that excited by Dr. Jameson's; for he proceeds to say, that Cheltenham water will sometimes kindle this very fire, which he had before affirmed it could extinguish or 'carry out of the body.' Whether an explosion accompanies this operation, is perhaps unnecessary to inquire. 'It must at the same time be observed, that these waters should be used with caution in gout; the author has seen them sometimes bring on a paroxysm.' For the entertainment, or rather the instruction of our readers, we shall treat them with another extract.

'Giddiness is generally a precursor of vomiting, whether it arises from food, medicine, or any other cause disturbing the stomach. But *an operation* of this nature upon the head, can never be injurious to the brain or its diseases. On the contrary, Cheltenham water, when it purges, has a tendency *to cool the brain.*'

Of the nature of the aforesaid operation on the head, or the manner in which the process of cooling the brain is carried on, this edition doth not treat.

It was our intention to have made some remarks on the author's arrangement and history of bilious diseases in this country, 'which require purging waters;' but we believe our readers will feel perfectly satisfied if we refrain from doing so, inasmuch as the composition and character of the whole book are fairly displayed by the extracts already given. The power of purgatives in controlling disease, are manifestly great. But that crowds should ride post to Cheltenham to enjoy benefits of purging, whether experienced in an amendment of their bodily ailment, or in affording a lively amusement, is almost incredible. For surely it is hardly necessary to observe, that the operation of purging can be conducted with equal success in any part of these kingdoms. Cheltenham, therefore, has no right to claim exclusive honour on this account, whatever assertions her 'resident physician' may make to the contrary. Did our strictures want proof, we could draw them from the labours of Dr. Jameson's countrymen. But surely a little reflection will satisfy him on this point. To suppose that all persons who spend their summers at Cheltenham are led thither by faith in the waters, is perfectly ridiculous. The constitution of society at watering-places, their amusements and novelty, incite the idle and opulent. For every visitant Cheltenham has its charms; for every passion and every vice it can afford gratification. The reputation of its water attracts many. These chiefly consist of individuals, whose disorders, real or imaginary, have baffled their domestic physicians; of individuals who, by bad habits, have reduced themselves to a second childhood, whose wants and complaints are equally numerous and undefinable, and who, having tried every body, and being satis-

fied with nobody, at last make amends for all their follies, by applying to Cheltenham waters and Dr. Jameson.

ART. XLIV. *Observations on the Utility and Administration of Purgative Medicines in several Diseases.* By James Hamilton, M. D. Fellow of the Royal College of Physicians, of the Royal Society of Edinburgh, Senior Physician to the Royal Infirmary of that City, and Corresponding Member of the Medical Lyceum of Philadelphia. Third Edition, revised and enlarged. 8vo. pp. 366. Murray. Printed at Edinburgh, 1809.

AFTER having enjoyed, for a long series of years, the advantage of conducting his medical observations on an extensive scale, Dr. Hamilton was induced, towards the close of 1805, to lay the practice, which his own large and repeated experience had confirmed, open to public decision. The value of his services was not overlooked, for a second and improved edition followed in a few months; and in the interval, which has since elapsed, our author has not been remiss in his endeavours to render that, which is now under review, still more entitled to notice. The principal alterations, which occur in the present volume, are the following: a different division and expansion of the introductory remarks; the chapters on typhus and scarlatina are enlarged; authorities in favour of the practice are brought forward, additional observations are communicated; and the probable utility of the plan of treatment in question more fully illustrated in the concluding remarks.

The style of the work is perspicuous: while the general reflections of the writer fully evince that discrimination and candour, which might be expected from an enlightened and experienced physician. We conceive, that such of our readers as may not have seen the book, will be pleased with the concluding passage of the first chapter, where, after briefly pointing out several of the impediments to which medicine

has been in its progress exposed, Dr. Hamilton thus proceeds:

'I do not dwell with pleasure upon these causes, which I apprehend have retarded the progress of medicine. I venerate the memory of those of our predecessors, whose labours have obtained for the healing art an important rank in the estimation of mankind. As they have occasionally failed, however, in promoting the advancement of medicine, we ought to take a lesson from their failure, and avoid the circumstances which have occasioned it. We should not tamely acquiesce in opinions, how respectable soever from age and authority, and we should receive, with laudable distrust, statements of facts proposed by others, till such time as we ascertain their accuracy; we should restrain within due bounds an overweening self-confidence, and scrupulously examine whatever may have appeared to us of importance in theory or practice, before we either adopt it ourselves, or bring it under the review of others; and, above all, we ought carefully to shun hasty conclusions and generalizations, which proceed only upon reasoning from matter of opinion. Be it our business, by a circumspect induction from facts, to establish sound principles, which will lead to the discovery of other facts, and these again to the introduction of more general doctrines, or a comprehensive and connected theory of medicine. This is safe dogmatism; by it we will [shall] acquire useful knowledge more quickly, and be enabled to combine and arrange its different parts with greater facility and precision, than by means of that meagre empiricism, so much vaunted at one time, but which, I believe, never did, and never can exist, independent of theory or reasoning, however incorrect.' p. 8.

In the concluding observations, Dr. H. recapitulates many of the leading points in the scheme of practice which it has been his object to illustrate, and adverts to its probably more extended application. Highly as we estimate his professional acuteness, and the soundness of his medical reasonings in general, we cannot but think that his zeal here borders on enthusiasm. We shall, however, be happy to find that the method in question answers the most sanguine expectations of its very able advocate. We feel fully convinced with Dr. Hamilton, that the regulation of the alimentary canal should be constantly held in view, both in the prevention and cure

of disease; and will, on all occasions, use our endeavours to contribute to the more general diffusion of a system of practice, which rests on the solid basis of experience, and is at once efficacious and safe.

ART. XLV. *The Modern Practice of Physic, exhibiting the Characters, Causes, Symptoms, Prognostic, Morbid Appearances, and Improved Method of Treating the Diseases of all Climates.* By Robert Thomas, M. D. of Salisbury. Third Edition. Corrected and considerably enlarged. Large 8vo. pp. 667. Murray.

THE favourable manner in which this work has been received by the public, renders any criticism upon its contents in a great degree needless. The second edition has been disposed of since the year 1807; and the present volume is both enlarged and improved. The author has collected the facts and intelligence which have been communicated in all the recent publications upon medicine; he has cautiously chosen, and, in general, skilfully adapted his materials; and with them he has combined his individual experience. In the present edition, he informs us, that he has arranged the diseases into classes and orders, 'nearly conformable to the nosology of Dr. Cullen.' Where so much excellence predominates, we are not disposed to censure or expose small defects; still we think that Dr. Thomas would have made his work more valuable, if he had not adhered so closely to the arrangement of Dr. Cullen. Without disputing the advantages of dividing diseases into classes and orders, or denying the general merits of the Cullenian system, we think that, in many instances, it is founded on hypothetical conclusions, and tends to impress the mind with erroneous notions of diseases. We therefore regret, that Dr. Thomas has continued the absurdity of arranging pyrosis, diarrhœa, and diabetes, under the order *spasmi*, which also contains such opposite diseases, as pertussis, cholera, asthma, and hydrophobia; and

in the same class *(Neuroses)* as apoplexia and hypochondriasis;—and that under the class *Locales*, he should still rank chlorosis and amenorrhœa; while menorrhagia, hæmatemesis, and hæmorrhois, are arranged with typhus, pneumonia, and dysenteria.

The formulæ, which Dr. T. has subjoined, are such as experience and judgment would sanction; but from the old nomenclature being continued, their utility is diminished. We would, therefore, recommend the author to publish an Appendix, in which he might reform them according to the new Pharmacopœia.

Art. XLVI. *An Essay on the Causes, Prevention, and Cure of Consumption. Wherein Bleeding is Exploded, and a New Method of Cure earnestly recommended to all Persons.* By Laurance Hope. With several remarkable Cases. Second Edition. No date.

This essay, as it is termed, consists of a string of shreds and patches, taken from the works of Cullen, Beddoes, Reid, &c. with a view to 'turn diseases to a commodity,' as Falstaff says, by advertising a pretended cure for consumption, in the shape of a secret nostrum, entitled 'Hectic Pills.' The advertiser (we will not degrade the appellation of author by applying it here,) possesses literary talents, it would appear, not quite adequate to the spelling of his own name; for in the course of this advertisement it is written in more ways than one; yet he presumes to offer advice, as well as pills, to those who wish to take both,—a very futile offer, we should imagine, since the whole of his peculiar skill is confessedly contained in his nostrum. The oracle of pills, however, is not to be approached; but may be consulted through the medium of his priest, that is, his agent and publisher, a seller of half price music, in Portland Street. Like the rest of his tribe, this obscure trader in boluses condemns 'the bold and confident assertions of empiricism,' and

disapproves of 'irregular practitioners,' with all the hypocritical assurance of unblushing quackery. As specimens of his sapience, it may be sufficient to mention, that he attributes the frequency of consumptions partly to the common use, in boarding-schools, of that 'highly obnoxious' food 'to delicate females,' called *potatoes!*—and informs us, that port wine 'has very strong claims to our attention, as a tonic, *in all cases of beginning consumption* more particularly.' No doubt the writer, who does not pretend to the title either of physician, surgeon, or apothecary, is not very solicitous about a few mistakes, if his pills find purchasers:

——————'mihi plaudo
'Ipse domi, simul ac nummos contemplor in arcâ.

ART. XLVII. *The English Physician, enlarged with Three Hundred and Sixty-nine Medicines, made of English Herbs, not in any former Impression of Culpeper's British Herbal, &c.* By Dr. Parkins, Author of the Holy Temple of Wisdom, &c. 8vo. pp. 389. Plates. Crosby and Co.

THE absurdities of which the practitioners of the healing art have been guilty in all ages, have been equalled only by the confidence, which the bulk of mankind repose in the nostrums and asseverations of designing quacks and impudent pretenders. Although the inhabitants of this island have been more than commonly guilty of this weakness, yet we do not attribute it solely to them, nor even to the present age. Former times, and other countries, afford a sufficient number of counterpoises to our Balms of Gilead, Vegetable Balsams, and Anodyne Necklaces: and although we have to bear the disgrace of a large fortune having been accumulated in a few years by the sale of the Metallic Tractors; yet, we may defend ourselves by placing before our accusers what Borellus relates of the magnetic tooth-picks and ear-pickers, which were in vogue about the end of the 17th cen-

tury. ‘ Quidam sunt,’ says that writer, ‘ qui dentisscalpia aurisscalpiaque habent, quæ tactu solo dolores dentium, aurium, et oculorum tollant: ego vero eum certo acceperim esse tantum magnete tacta, id tibi revelare volui.’* In spite, however, of this incorrigible credulity, we had imagined, that astrologers, astrological physicians, and their works, had long since been lulled to dread repose, and consigned to the vault of all the Capulets; but the appearance of the improved edition of the ‘ English Physician,’ now before us, convinces us of our error; and indicates, that the works of these mystical worthies still live, and are read.

This work consists of a catalogue and descriptions of British plants, sufficiently unscientific and erroneous, with an account of the ‘ government and virtues’ of each plant; directions for making syrups, juleps, &c.; an astrological figure of the heavens, with an illustration; and, lastly, the family physician, and ‘ a present for the ladies,’ exclusively the productions of *Doctor* Parkins’ genius.

We must confess, that we have been mightily edified by the accounts which the learned Culpeper, and the still more recondite Dr. Parkins, have given us of the antipathies of Mars, the sympathies of Venus, and the various effects of the influence of Jupiter, Saturn, and Mercury, upon the bodies of sublunary mortals; and would willingly extend the benefit to our readers, by transcribing largely from the volume, did we conceive that we could do justice to its contents by our quotations. As, however, we do not think this possible, and as we are informed in the Preface, that the whole key to physic is given under the herbs ‘ Wormwood and Carduus Benedictus, if you please to make a good use of this key,’ we shall transcribe the latter article; both, because it is a fair specimen of the style of the book, and is short, and for divers other reasons, which, in the present age of the moon, we do not think ourselves authorized to divulge.

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* Petri Borelli Hist. Medico-Physic. Lipsiæ, 1676. Cent. 4. obs. 75.

'Carduus Benedictus ♂ in ♈ (h. d. 2.)

'It is called Carduus Benedictus, or Blessed Thistle, or Holy Thistle: I suppose the name was put upon it by some that had little holiness in themselves.

'I shall spare a labour in writing a description of this, as almost every one that can write at all, may describe them [it] from his own knowledge.'

'*Time.*]—They flower in August, and seed not long after.'

'*Government and virtues.*]—It is an herb of Mars, and under the sign Aries. Now, in handling this herb, I shall give you a rational pattern of all the rest; and if you please to view them throughout the book, you shall, to your content, find it true. It helps swimmings and giddiness of the head, or the disease called Vertigo, because Aries is in the house of Mars. It is an excellent remedy against the yellow jaundice, and other infirmities of the gall, because Mars governs choler. It strengthens the attractive faculty in man, and clarifies the blood, because the one is ruled by Mars. The continual drinking the decoction of it helps red faces, tetters, and ring-worms, because Mars causeth them. It helps the plague, sores, boils, and itch, and bitings of mad dogs and venomous beasts; all which infirmities are under Mars: Thus you see what it doth by sympathy. By antipathy to other planets, it cureth the venereal disease. By antipathy to Venus, who governs it, it strengthens the memory; and cures deafness by antipathy to Saturn, who hath his fall in Aries, which rules the head. It cures quartan agues, and other diseases of melancholy and adult choler, by sympathy to Saturn, Mars being exalted in Capricorn. And it provokes urine, the stopping of which is usually caused by Mars or the Moon.'

Such is this notable key, which we are afraid we have not capacity enough to use; and must be content to plod on, without the benefit of that celestial light which beamed upon our astrological ancestors. For the same reasons, burthened, as we are, with terrene grovelling appetites, we shall be excused for preferring the three last pages of the book, entitled 'A Present to the Ladies,' to all the rest; and for acknowledging, that we would rather fortify our bodies with the currant wine, made according to the recipe of the learned

editor, than with herbs, even ‘ of the nature of the Lord of the ascendant.’

‘ Sed tamen amoto quæramus seria ludo.’

We must, in sober earnest, enter our protest against the republication of such works. We cannot, indeed, reflect without shuddering on the mischief likely to result from the perusal of this book by certain classes of females; who, we know from our own experience, constitute the major part of the readers of popular medical works; and whose garbled scraps of knowledge raise innumerable obstacles to oppose the efforts of the regular physician; and do more to destroy the comfort of their neighbours and society, than could be done by the plague itself, were it again to visit our shores.

In order to shew that our fears are not awakened by groundless apprehension, we have only to mention, that decoctions of stimulant herbs in *wine*, and ardent spirits, are ordered to be given in copious draughts, in small-pox, pleurisy, and many other inflammatory complaints. We are informed (page 2,) that a decoction of a pound of the bruised wood and leaves of Dulcamara, in three pints of white wine, helps ‘ to cleanse women newly brought to bed!’ Under the article *Baytree* (p. 32,) we are told,

‘ That seven of them (the berries) given to a woman in sore travail of child-birth, do cause a speedy delivery, and expel the after-birth!’ And under sow thistle, (p. 286,) ‘ three spoonfuls of the juice,’ we are informed, ‘ taken warmed in white wine, and some wine put thereto, causeth women in travail to have so easy and speedy a delivery, that they may be able to walk presently after.’

But enough of such dangerous absurdities.

We have only to add, that the plates with which the volume is ornamented, are worthy of the work which they serve to illustrate.

ART. XLVIII. *Surgical Observations on the Constitutional Origin and Treatment of Local Diseases; and on Aneurisms.* By John Abernethy, F.R.S. Honorary Member of the Royal Medical Society of Edinburgh, and of the Medical Societies of Paris, Philadelphia, &c. 8vo. pp. 292. Longman and Co.

As there is some delusion in the title-page of this volume, it may be not unnecessary to state, that the chief part of the contents have appeared before, and that the first portion is little else than a republication of Mr. Abernethy's Observations on what he chose to term, rather quaintly, 'the *Disorders of Health* in general, and of the Digestive Organs in particular, which accompany Local Diseases, and obstruct their Cure;' to which, instead of the remarks on *Nævi materni*, and on Diseases of the Urethra, he has now appended his paper on Aneurisms. There also appears to us to be a misnomer in the case; as, except on the last-mentioned topic, the 'observations' have few or no pretensions to the character of 'surgical,' but might have been with much more propriety termed *medical* or *pathological*. Though therefore, at first sight, it might be deemed inconsistent with our plan, to notice them in the present chapter, we do not see that we should be justified in introducing them in any other division of the Review.

When the former edition of this book appeared, Mr. Abernethy thought necessary, if we remember right, to make an apology for the haste with which his remarks on the mode of practice, that he was anxious to recommend, had been put together. His eagerness, at that time, appeared not only excusable, but laudable; for it would have been almost a crime, to have withheld from the public the results of his extensive and successful experience, any longer than was absolutely necessary for imparting to them a sufficient degree of precision: but, after the communication was once made, and the utility of the method of treatment was universally admitted, we do think, that Mr. A. might have bestowed a little more trouble on the polishing of his performance, so as to

have given it a more connected and systematic appearance. It also strikes us, as somewhat extraordinary, that, having brought a general charge of ignorance and inattention against his brethren, which they certainly shewed no readiness to admit, he should not have taken advantage of the present opportunity, to prove the justness of the accusation, if it really allow of proof. We are inclined, however, to doubt the validity of the author's assertions on this head; and we shrewdly suspect, that, if the question were minutely examined, the merit of having first introduced the novel practice of purgation would not be found to belong either to Mr. Abernethy, or to Dr. Hamilton, or to Dr. Curry.

Certain it is, that in the writings of several of the older physicians, the administration of laxatives in febrile and cachectic diseases, is strenuously inculcated, though often contradicted by their speculative notions of these disorders; and at one time, as is well known, the *antigastric* system was in high vogue. If Mr. Abernethy will take the trouble of looking into the works of Van Helmont, for example, he may find many traces of his own practice and his own views of disease, obscured, no doubt, by the caballistical language of the writer, and the erroneous doctrines of the age, but on that account, perhaps, the more deserving of notice. Thus, in Van Helmont's opinion, every disorder of the system originates from the digestive organs—'morbus est ens substantiale, causis *Archealibus*, tam materialiter, quam efficienter genitum:'* and the preparations of mercury, and especially the *mercurius diaphoreticus dulcis*, are the remedies on which he seems to place most reliance. The last, he says, is 'melle dulcior, et ad ignem fixus solis horizontis omnes proprietates habet. *Perficit enim, quicquid medicus et chirurgus possint optare sanando.*'† '*Mercurius* igitur *præcipitatus* juxta præscriptum Paracelsi,' we are told in another place, 'curat omnem hydropem, non quatenus purgat, sed in quantum materialiter transiens per intestina, resolvit extravenatum

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* Ortus Medicinæ, p. 449, (Ed. Elzevir. 1648.) † Ibid. p. 790.

cruorem.* 'Imo et in tabe extinctis, summeque macilentis vidi jecur supra modum excrevisse, penitus licet exsangue. Vim ergo crescitivam *mercurius* ille enecat, non secus atque argentum tremulum, in arborem, terebra usque in medullam foraminatam injectum, eandem occidit. *De proprietate itaque mercurii est, vim accretricem hepatis extinguere.*'† Even phthisis he thinks may be cured by this divine remedy.‡

These hints, which our limits forbid us to extend, are not brought forward, from a captious spirit, or a desire to detract from the well-earned reputation of our contemporaries. To the individuals whom we have already mentioned, in particular, we are disposed to allow every due praise: we respect their talents, and their zeal for the improvement of the art. Though a few of their predecessors may have stumbled, as it were, upon the same path of research, it has been reserved for them to pursue it clearly, and under the guidance of that light which an improved physiology affords. It is our anxiety to see their claims established on the firmest basis, that urges us to request, that they will investigate the history of the practice which they recommend, and corroborate their doctrines by the sanction of former ages.

ART. XLIX. *The Medical Guide, for the Use of Families and Young Practitioners in Medicine and Surgery; being a Practical Treatise on the Causes, Prevention, Cure, &c. of the Diseases incident to the Human Frame; exhibiting the latest and most important Discoveries in Medicine, Pharmacy, &c.* In Two Parts. By Richard Reece, M.D. &c. SIXTH EDITION. CONSIDERABLY ENLARGED AND IMPROVED. 8vo. pp. 558. Longman and Co.

THOUGH fully aware, that the sale of a book is often in the inverse ratio of its merits, and that the most contemptible productions sometimes find the greatest number of purchasers, we were not, we confess, altogether prepared so soon

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* P. 520. † P. 521. ‡ P. 723.

to announce another edition of 'The Medical Guide.' We had proceeded, however, but a very short way in the task of perusal, when we were relieved from our embarrassment, by discovering that we had only to review the *sixth edition* of the TITLE, PREFACE, and DEDICATION, and that the only *enlargement* and *improvement*, which these contained, was an advertisement of the 'Dictionary of Domestic Medicine,' the study of the contents of which, we are assured, 'cannot fail to afford the most exquisite delight, and prove highly beneficial to society, by enabling the public to detect ignorance, and guard against every species of quackery.' Pref. p. xii. But there is one species of *quackery* which Dr. Reece has neglected to mention, though from his practical opportunities he must be peculiarly qualified to explain and illustrate it, in all its various shapes: a species of quackery, of which we have a flagrant example in the volume now before us, and which cannot be stigmatized in too severe terms. We have already had occasion to expose some of the artifices, by which he endeavours and contrives to pass off his disgraceful performances, as the produce of much labour and study: we have now to enrol him as a worthy member of that most honourable fraternity, whose praises we have sounded on a former occasion.* His brethren of the trade will doubtless hail his entrance, with peculiar acclamations, and in their own classical style:

'Dignus, dignus est intrare
'In nostro docto corpore!'

Their practices, however, we shall continue to denounce, regardless of the sneers of partial critics, and of the charge of 'personal rancour,' that has been brought against us, because we ventured to abuse a book which is almost too vile to be noticed. To such insinuations we can only answer in the words of St. Augustine, 'Non est malevolus qui crimen alterius indicat, quia indicando corrigere potest, et tacendo frater perire permittitur.'

* Vol. I. p. 192.

ART. L. *Critical Analysis of the Opinions and Practice of Dr. William Saunders, in Bilious Complaints, as stated in his Treatise on the Structure, Economy, and Diseases of the Liver; together with an Inquiry into the Properties and Component Parts of the Bile and Biliary Concretions.* By Hector Campbell, M. D. Third Edition, with Additions and Improvements. 8vo. pp. 32. Maxwell and Wilson.

IN this 'Analysis" we have in vain sought for a single trace of the impartiality to which the author lays claim, but, instead of it, have met only with abundant proofs of his injustice and ill-nature. Envy or malice we take to be the prime instigator of this attack; for illiberal sarcasm and contemptuous sneers are the weapons employed; and these deadly instruments are not only levelled at the venerable author of the 'Treatise on the Liver,' but, in passing, are hurled at all the members of one of the most respectable medical schools in the metropolis. We have no doubt, that there are many passages in the physiological part of Dr. Saunders's work, which more recent discoveries, if the hurry of a very extensive practice had allowed him to refer to them, might have led him to alter, and that many points of his doctrine and practice might be disputed; but we have no hesitation in affirming, that it ought not to be done in the manner, nor in the language, of this performance of Dr. Campbell's. The tone and style are insulting and low; they are as discreditable to him as a man, as they are beneath the dignity of criticism.—Out of many that might be selected, we will content ourselves with one or two examples, which will be sufficient to give an idea of the manner of Dr. C., as well as of the correctness of his reasoning.

Dr. S. in the 4th chapter of his work, in combating the opinion, that the blood of the hepatic artery is partly expended in secretion, states, that 'it is well known that parts of the body, which are not secreting organs, are furnished with a larger proportion of arterial blood than the liver: of this kind are the muscles; the brachial artery being larger in respect to the arm, than the hepatic artery is with

respect to the liver.' On this Dr. C. remarks, ' O Willy Saunders! unfortunate Willy! What thou hast adduced as not secreting organs, *the muscles*, although unknown to thee, and the Borough or Suburbian School, are the most secreting organs for fibrin, &c. belonging to the body. Hence, in opposition to the very teeth of your argument, the necessity of the largeness of the brachial artery, and the demand for a larger proportion of arterial blood. This important stumbling-block to remove, will require a Hercules, not to be found in a Curry—a Babington—a Haighton —nor any from among the members of the *learned* Borough School. A man should be the author of his own works.' The scurrility of this passage need not be pointed out; and we think, that it will go a great way towards satisfying our readers of the humorous manner of our author, as well as of the justice of his claims to impartiality; at the same time, that it will enable them to judge of the fitness of that man to be the analyser of a physiological work, who confounds functions so distinct as those of nutrition and secretion!

Again, in the 5th Chapter of his work, Dr. S. after stating the opinions of Ruysch and Malpighi on the ultimate secreting apparatus of glandular bodies, confesses his incapacity of solving the problem to the satisfaction of his readers, and therefore begs leave to withdraw from the contest. On this we have the following remark from Dr. C. ' Arriving at the *pori biliarii*, and then leaving us in the dark, reminds me of a clergyman in Sussex taking his friend to the top of a high hill at 12 at night, and then observing, you are brought to a place that would afford the most distinct view of things, were we only in possession of *light*.' Now, we would ask, what resemblance there is between the conduct of a guide, who wilfully leads you in the dark to a situation where you might be pleased or instructed, when it was equally in his power to have conveyed you to the same place in the light; and one who takes you by the hand, and directs you safely through an intricate country, while there is light, and while he is acquainted with the road, but candidly tells you, when night closes round you, and his infor-

mation fails, that you had better stop; that, unable to decide on the more proper path from the intelligence of others, he declines conducting you any farther, lest he should plunge you into inextricable difficulties? Surely there is no similarity in these two lines of conduct, and it is certainly no difficult matter to determine which most resembles that of Dr. Saunders. In our inquiries of every description, it would be well, if our guides had always served us as faithfully as he has done in this instance. To stop where observation and experience fail, and to preserve a prudent scepticism where certainty is unattainable, are the circumstances which distinguish the rational physician from the medical dogmatist.

Lest our readers should suppose, that the public demand for this pitiful performance has been so great as to carry it through three several impressions, it may be not improper to state, that it made its first appearance, piece-meal, in the pages of 'The Medical Observer,' and of another celebrated publication, ycleped 'The Medical Spectator,' now, alas! defunct,—and then issued from the press in its present unaltered shape.

ART. LI. *A Treatise on the Management of Female Complaints.* By Alexander Hamilton M. D. Professor of Midwifery in the University, and Fellow of the Royal College of Physicians, and of the Royal Society, of Edinburgh, &c. Sixth Edition, revised and enlarged; *with Hints for the Treatment of the principal Diseases of Infants and Children,* by Dr. James Hamilton junior, Professor of Midwifery in the University of Edinburgh. 8vo. pp. 408. Longman and Co. Printed at Edinburgh.

BESIDES the adventitious claims to attention which the work before us derives from the professorial honours of its authors, it possesses intrinsic merits sufficient to ensure a notice of higher character. We are disposed to give entire credit to the assertion contained in the advertisement, that,

'in superintending the present edition, his son has endeavoured to accomplish, as nearly as possible, the favourite wish of his father, that every successive impression of the work might be rendered better calculated for general use;' and we are willing to allow, that the omissions he has made, and the additions he has introduced, are on the whole judicious: we have particularly to acknowledge our obligations for the 'hints on the diseases of infants and children.' We are far, however, from thinking either the arrangement or the execution of the plan complete. With respect to the former, we were much surprised in the Chapter on the *diseases* which occur in the unimpregnated state, to see a section devoted to *Intemperance:* and, in treating of the diseases common to infants and children, an attempt at greater discrimination would not, we presume, have been unacceptable. Thus, we here have, as Sect. 1, *Anomalous* eruptions of the skin; as Sect. 2, Glandular affections, bringing together the Mumps and Scrofula; and, as Sect. 4, Water in the head and other *dropsical* affections.—With regard to the mode in which the work is executed, Dr. Hamilton's want of greater success arises, in the first place, from the very nature of the undertaking; for in books for popular instruction, it is extremely difficult to avoid observations which are altogether of a professional nature, and instructions which medical men alone are capable of fulfilling. From among many of this description, we shall select the following paragraph on immoderate menstruation. 'In some cases where the living powers seem greatly depressed or sinking from excessive discharges, *very large doses* of opium, given boldly and frequently, have proved the only possible means of preserving life.' Should any Lady Bountiful act on such a plan, we could not but entertain much apprehension, though little doubt, as to the result.

There appears to be too great confidence respecting the operation of some remedies, and the doses in which they are to be employed; and, on the other hand, a prejudice with regard to the effects of others, which we do not think that experience warrants. Thus, in the case of iron, Dr. H. speaks of

a table spoonful of the wine as a dose. p. 331. In that of calomel for croup, the quantity is increased according to the age, till, for children of five and six years old, the dose is fixed at from four to five grains (p. 364), to be repeated *every hour* till the breathing is relieved; so that, in one instance, a girl of seven years of age (p. 366), had swallowed, within little more than sixty hours, 133 grains, in the author's opinion with complete success: while others might think, *pace tanti viri*, with fortunate impunity. And, lastly, with respect to digitalis, 'one child of four years old, whose situation seemed quite desperate, from effusions into the chest as well as into the belly, had five drops (of the tincture) every hour for fourteen hours, and recovered completely.' p. 382.

The subjoined passage respecting the treatment of measles, shews some *local* irritation, and more warmth of temper, than soundness of observation. After premising, that he had never met with a case of this disease in which blood-letting was necessary, Dr. H. remarks, p. 373,

'The objections to wine and nourishing diet, which it is so often necessary to combat, probably arise from the supposition that the frequency of the pulse and the cough are the effects of inflammation, when, in fact, they are occasioned by *the torpor of the lymphatics*.—The aphthæ, the putrid diarrhœa, the dropsical and glandular affections, and the gangrene which is apt to take place on blistered parts, afford such unequivocal marks of debility, that no other than *a descendant of the renowned Sangrado himself could overlook them*.'

Nor do we think the statement respecting the cold affusion in scarlatina a candid representation.

'The same may be said (that it mitigates) of the affusion of cold water over the whole surface during the hot stage, which, by some practitioners, has been *extolled beyond measure*. Its *apparent* efficacy may be explained on the principle, that, in much more than the majority of cases, the disease is mild, and would terminate favourably whatever practice were adopted.' p. 375.

The enthusiasm of the professor sometimes degenerates into credulity. Speaking of rickets, he records the following

experience: 'The opiate friction has seemed so efficacious, that, in several cases *where the bones had been actually bent*, before it was had recourse to, their natural shape was restored by *it*.' p. 391. Under the head of jaundice arising from *accumulation of bile*, it is asserted, that 'where women have the resolution to swallow a raw egg every morning fasting after the disease has been removed, they may be assured of thereby preventing its return.' p. 93. Credat Judæus! In treating of the management of lying-in women, this prudent caution is given; 'Unless, under particular circumstances, red wine of every description ought never to be taken till the end of the second or third week, *because all red wines tend to stop the cleansings*.' p. 157. Whence we plainly perceive the difference between *une sage femme* and *une femme sage*.

Though the language is in general extremely plain, and the style perspicuous, yet we now and then meet with some *wordy* sentences; and we cannot see the necessity for substituting *lavement* in the place of *glyster*. What nurse, we will take the liberty of asking our author, is likely to be acquainted with French, or what lady is so peculiarly delicate as to shrink from our old English appellation, and not be shocked with the homely phrase of *straight gut*, and many others that frequently occur.

In making these strictures, we are influenced by the wish of inducing Dr. Hamilton to give a more deliberate consideration to certain parts of a work, which, though it does not meet with our unqualified approbation, is calculated to convey much useful knowledge.

We are happy to find that Dr. H. is the firm and temperate friend of vaccination.

ART. LII. *Observations on Indigestion: in which is satisfactorily shewn, the Efficacy of Ipecacuan, in relieving this, as well as its Connected Train of Complaints, peculiar to the Decline of Life.* The Third Edition, with Additions. Translated from the French Memoir of Mr. Daubenton, Member of the Royal Medical Society. Paris. 8vo. pp. 24. Callow.

WE have looked for the *additions* to this 'third edition;' but can find none that distinguish it from the one published in 1807.

ART. LIII. *Lectures on Diet and Regimen: being a Systematic Inquiry into the most Rational Means of preserving Health and prolonging Life: together with Physiological and Chemical Explanations, calculated chiefly for the Use of Families, in order to banish the prevailing Abuses and Prejudices in Medicine.* The Fourth Edition, revised, corrected, and improved. By A. F. M. Willich, M.D. 8vo. pp. 445. Longman and Co.

THIS publication, we have reason to believe, is, in the technical phrase, merely a *reprint* of the third edition. We do not mention this in disparagement of the work; for we know not whether, on revision, an editor could have made any considerable improvement, either upon the plan or the execution of it, as it was left by the author. It must certainly be deemed one of the most rational and correct popular treatises on the subject of health, that our language affords.

ART. LIV. *Thomæ Simsoni, Medicinæ Professoris Candossensis, in Academia Andreana, apud Scotos, De Re Medica Dissertationes Quatuor.* In usum Medicinæ et Humanitatis Studiosorum iterum excudi curabat Andreas Duncan Senior, M. D. et P. Principis Scotiæ Medicus Primarius. His adnectuntur, *De Asthmate Infantum Spasmodico, Dissertatio,* Auctore Jacobo Simson. *De Alvi Purgantium Natura et Usu, Dissertatio;* et *De Laudibus Gulielmi Harvei, Oratio,* Auctore Andrea Duncan. 8vo. pp. 327. Venales prostant apud Archibaldum Constable et Socios.

DR. SIMSON is now chiefly known as an unsuccessful follower of the Stahlian system. His dissertations, however, contain many useful remarks, and prove his acquaintance with the earlier writers in medicine: but we can hardly recommend them as fit models of a Latin style, to those to whom they are dedicated. The other tracts in the present volume are respectably written.

ART. LV. *Diseases of a Warm and Vitiated Atmosphere, from Climate, Local Situation, or Season of the Year. Together with an Historical Essay on the Experimental Philosophy of Human Life, that of Diseases and also of Remedies.* By William Barnwell, M. D. late Surgeon in the East Indies. Second Edition. 8vo. pp. 458. Row, Marlborough Street.

THE *second edition!* if we may credit the title-page; but,—*fronti* nulla fides,—this title-page is very clumsily pasted in, and the remains of a former one, which has been very clumsily torn out, obtrude themselves on our prying optics, and therefore absolve us from farther labour.

ART. LVI. *The Pathology of the Membrane of the Larynx and Bronchia.* By John Cheyne, M.D. 8vo. pp. 204. With Engravings. Printed at Edinburgh.

IN a short prefatory notice the author states, that another edition of his essay on croup being required, he 'determined to examine the subject again, and to add whatever [*he*] had derived from a greater extent of practice.' This, we are willing to allow, was extremely laudable, but we think the object might have been accomplished with less alteration in the form of the work; and surely the imposition of a new title, the great and important feature of the present publication being still the history and treatment of croup, was altogether unnecessary. Nor shall we find fault with Dr. Cheyne 'for having become sensible to the imperfection of his first attempt;' that he may not, however, again incur the risk of reputation, which is frequently attendant on prematurely appearing before the public, we shall recommend to his consideration the following maxim, recorded by an eminent prelate: 'It is with *books* as with animals: those live longest with which their parents go longest before they produce them.'

Among the many additions which we have remarked, there are some which are certainly considerable improvements; but we regret to find that the author does not pay that regard to simplicity of style which is so essential a requisite in the communication of medical instruction.

'Ornari præcepta negant, contenta doceri.'

In the cases which are subjoined, the year of their occurrence is, except in two instances, omitted; a circumstance which, to a certain extent, diminishes their authority, and prevents the reader from tracing the history of the disease, as it may have appeared at the same period in other situations.—With respect to the treatment recommended by Dr. Cheyne, we believe it to be, on the whole, the most judicious; resting principally on bleeding, particularly from the

jugular vein, in the first or inflammatory stage, and on emetics in the second, where the effusion has taken place.

He observes, p. 53, 'I have had many an opportunity of seeing an alarming attack of croup removed by an emetic alone; and, with the exception of emetics, no medicine with which I am acquainted is entitled to confidence in the second stage of croup.'

With regard to calomel, though Dr. Cheyne enumerates it among the remedies to be employed in the first stage, yet he does not entertain a favourable opinion of its efficacy; as he thinks that the primary operation of this medicine on the stomach and bowels may be better accomplished by antimonials; and that, therefore, those who trust to calomel in the cure of croup, must rest their expectations on its alterative powers. p. 47.

This we do not conceive to be a fair statement of the question, nor do we deem the short critique on Mr. Rumsey's paper,* in which the subject was first brought forward, by a British practitioner, at all creditable to Dr. Cheyne's candour; for, whatever 'unusual concomitants' might have attended the disease, the symptoms and appearances, on dissection, clearly ascertained the nature of the complaint. In addition to the very modest and judicious account of his experience, in the employment of calomel, given by Mr. Rumsey, we have a very decided testimony in favour of this remedy, from the Professor of Midwifery in the University of Edinburgh, who expressly says, that, 'in every case where it was employed, previous to the occurrence of the lividness of the lips and other mortal symptoms, (amounting now to above forty,) it has completely succeeded both in curing the disease, and in preventing any shock to the child's constitution.' Dr. Hamilton, however, proceeds to state, that 'it is necessary to add, that I have now seen two cases where, although all symptoms of the croup were removed by the use of calomel, the patients sunk, from the weakness which followed.'—

* Transactions of a Society for the Improvement of Medical and Chirurgical Knowledge, Vol. II.

'Those cases enforce the necessity for carefully watching the progress of the disease, so as to omit the calomel when the symptoms begin to yield.'* The advantages of this method of treatment we, however, still conceive to be a matter of practical inquiry; for its modus operandi, as well as its comparative safety, do not appear to be satisfactorily ascertained. Dr. Hamilton, in the work already referred to, states, that it 'commonly occasions both vomiting and purging, and in true croup the first alleviation of symptoms generally follows the discharge of a great quantity of dark green-coloured matter (like boiled spinage) by stool.' p. 363.

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* Hamilton on The Management of Female Complaints, &c. 1809, p. 366, 367.

CHAPTER II.

SURGERY AND MIDWIFERY.

ART. I. *A System of Operative Surgery, founded on the Basis of Anatomy.* By Charles Bell. Vol. II. Royal 8vo. pp. 385. Longman and Co.

THE man, who professes to teach any science, is reasonably expected to possess, on the particular subject of his labours, a much greater extent of information, than we look for in him, who studies merely for the purpose of practical application. This expectation is raised still higher, if he undertake to instruct the public by his writings; and occasions then, if they fall below the imaginary standard, to be visited with greater severity of animadversion. Mr. Bell seems to understand fully the nature of his situation: but he announces himself with such confidence as to invite, instead of deprecating, the rigorous scrutiny of criticism. He boasts of having enjoyed very peculiar advantages for the acquirement of professional knowledge; informs us, that he has not consulted books; and claims the merit of complete originality. It will be the business of our review to determine how far the contents of the book correspond to these statements.

That frequent practice on the living body must be joined to correct anatomical knowledge, in order to form a good operator, is now generally admitted. The human body, as well as that of beasts, may be cut up by one totally ignorant of its structure; and there is a description of surgeons, whose incisions are as purely mechanical as those of the butcher.

But the race is rapidly declining; and, although some men in public situations may still be heard actually to boast of anatomical ignorance, the rawest pupils are hardly imposed on by such assertions, but solve the paradox by applying the fable of the fox without a tail. We concur, therefore, entirely with Mr. Bell in the opinion, that a writer on operative surgery should deduce his views from actual observation, grounded on correct knowledge of anatomy.

The title of the work, and the author's employment as a public teacher, did encourage us to hope, that the anatomical parts would be particularly elaborate. Our expectations have been disappointed; no superiority over other writers can be discovered in this respect, and even the minor praise of accuracy cannot be invariably bestowed. The term apophysis of a bone is employed, wherever the subject is mentioned, instead of epiphysis. An accident is described under the title of dislocation of the tendon of the latissimus dorsi from the scapula, (p. 179,) although no part of the tendon is in contact with that bone. The propriety, too, of arranging this under the fractures of the scapula, seems rather questionable. We are directed to cut along the edge of the peroneus longus, in order to expose the anterior tibial artery in the upper part of the leg. In this mode of proceeding, that muscle and the extensor longus digitorum must be cut through, and the latter must be extensively detached from the fibula; whereas an incision on the fibular edge of the tibialis anticus enables us to reach the vessel, by separatting the muscles, without any division of their fibres. The nerve accompanying the artery is not mentioned. Neither the basilic vein nor the internal cutaneous nerve are noticed in the directions for cutting upon the humeral artery. A lecturer on anatomy should have known better than to confound, in a common name and description, parts of such different organization, properties, and functions, as the synovial membranes and ligaments of joints. Yet we find them both ranged under the definition of parts, 'dense, white, strong, and possessed of little vascularity.' p. 225. If a consideration of the anatomical structure can prove any point, it is the

impossibility of a dislocation of the vertebræ without fracture: and the concurrent testimonies of the most experienced men confirm the inferences of the anatomist. The author seemed disposed at first to adopt this view of the subject. 'Dislocation cannot take place in the vertebræ of the back and loins, I imagine; from the circumstance of the ligamentous connexions being fully stronger than the bone.' We discovered our mistake in the next sentence; 'but a species of subluxation may certainly take place in the lumbar vertebræ.' p. 136. This is said to happen in wrestling, tumbling, &c., when 'the ligaments already stretched are torn up.' Thus, in ten lines, the ligaments from being 'fully stronger' than the bone, have become fully weaker. We are then favoured with 'a plan of dislocated vertebræ;' in which, although the accident has before been termed a species of subluxation, the articulating processes are completely separated from each other. As these plans are frequently introduced, we must take the liberty of hinting, that they are not proofs that the accidents which they represent can occur in the living body. The symptoms of this subluxation are described, and the directions for its reduction are not omitted. We have two methods offered for our choice; putting the patient over a barrel, and bending his body forwards, or jolting him until the bones slip into their places. How will the author answer to his conscience for neglecting to determine which of these deserves the preference? Happily, however, the case is not desperate, if neither should succeed; for, 'in length of time and by degrees,' the vertebræ have disentangled themselves.

In the rules for cutting down upon the arteries, extraordinary merit is claimed for teaching the anatomy of these vessels in a new way; and the author comments, with much apparent self-complacency, on the absurdities of his cotemporary teachers.

'I think I was the first who taught my pupils the anatomy of the arteries in partial views, cut down upon them, and endeavoured to shew them in their natural confusion, and as they are seen in opera-

tion.' p. 335. 'When I say that I was the first who taught the arteries thus, I know not that it is done even now by others,' &c. p. 336.

In justice to the London lecturers, we must observe, that the anatomy of the arteries was taught by recent dissections, in which the natural position and connexions were exhibited, many years before Mr. Bell's emigration from the north. And we know further, that, at a date much anterior to the event last mentioned, Mr. Macartney, the lecturer on Comparative Anatomy at St. Bartholomew's Hospital, had prepared a work on the express subject of cutting down to the arteries; in which the natural connexions of these vessels are carefully described, and precise rules for finding them are delivered. Occasion is taken, in the course of these remarks, to compliment the Royal College of Surgeons on the mode in which their examinations are conducted. Mr. Bell cannot be so strangely ignorant of facts, which are notorious to every body else, as to believe that this praise is merited in the slightest degree. What epithets, then, do the motives which dictated the eulogium, deserve?

Thus much for the anatomical character of this system. In the preface to the first volume, the author has anticipated, and endeavoured to answer, a question, which will naturally occur to his readers, concerning his opportunities of surgical observation. Our confidence is challenged in a vapouring statement, more calculated, in our opinion, to rouse than to allay suspicion. 'I have described no operation which I have not performed; from bleeding in the arm to lithotomy with the knife alone; from tying the umbilical chord to the operation of the Cæsarean section.' Pref. to Vol. I. p. 11. Were these feats performed on the dead or on the living body? If on the latter, how often, and where has Mr. Bell performed them? How many luxated vertebræ has he reduced by rolling men on barrels, and jolting them? These questions may be sufficiently answered by a reference to the work, where deficiency of practical information is betrayed in every page. This want might have been supplied, in many instances, by the numerous valuable publications on several parts of sur-

gery: but then the author's claim to originality would have been vitiated. 'This work,' says he, 'I profess to be original.' He need not have added the next sentence, for every chapter proclaims the fact most loudly. 'I have not collected my library around me, and consulted books chiefly.' These great pretensions are immediately afterwards withdrawn in a confession, of which we feel ourselves able to pronounce the entire truth. 'But though original in one sense, the student may discover in it no novelties, nor the intelligent surgeon, who holds communication with his fellows of the profession, find any rules or observations with which he is not familiar.' Pref. p. ix.

Many of the anatomical remarks seem to be introduced merely to justify the title of the book; for they illustrate nothing in the diseases described. The following will serve as a specimen: 'When we consider that the œsophagus is a powerful muscular tube, and that it is liberally bedewed with mucus, and consequently is of a glandular structure, we have a key to the knowledge of its diseases.' p. 17. Theoretical discussions of pathological doctrines do not appear by any means essential in a treatise on operative surgery; yet they are introduced with no unsparing hand. The desire of appearing original is kept in view in these parts, in which there is a palpable attempt to imitate the figurative and caricature style of Mr. John Bell, ending often in the production of passages, from which it is difficult to extract any meaning. Sometimes, too, our author has a moral reflection: 'Of all the ways of putting a period to existence, the cutting of the throat is the most dreadful to the sane imagination. But it is the horror of the deed, on which the insane wretch broods.' p. 22. Nothing can be more out of place than such scraps of sentiment in a description of surgical operations.

The following passage on the wry-neck may be taken as a fair sample of the author's style, reasoning, and general accuracy.

'In the cure of wry-neck, which is submitted for operation, the mastoid process is as it were drawn towards the sternum, the head is inclined to that side (which side?), and the chin is pitched up. On

examining the cause of this, the mastoid muscle of that side will be found to be smaller than that of the other side; it feels stringy and hard; it will not stretch when the muscle of the other side acts so, that it suddenly checks the turning of the face towards the same side. The disease of the muscle, which occasions this, is a very singular one. The muscle is changed into a firm substance, which to the knife cuts like gristle, and which is equally incapable of contraction, or stretching. In one instance I traced this disease to a fall, and twist of the neck. One cannot imagine a more likely cause of this disease, than a strain upon the muscle. I have seen a similar disease, in a portion of the biceps cubiti, producing the effects of an anchylosis, in fixing the elbow-joint. The only thing that the surgeon has to consider deeply, is whether the twist of the head proceeds from this disease or not. Whether the vertebræ have not greatly suffered, or it may be, there is almost an anchylosis of the cervical vertebræ. We have to see that there be no paralysis of the muscles of the opposite side, rather than a permanent induration of this.' p. 44, 45.

We should be puzzled, if it were necessary to decide, whether this passage were most exceptionable, as a specimen of pathology, or of literary composition. Our readers may be assured, that the muscle, when exposed in the operation for dividing it, has the ordinary appearance, instead of being converted into gristle; and that the hardness and stringiness arise only from its being in a state of contraction.

'Extraction of the cataract,' says Mr. Bell, 'is a bad term, and founded on a dangerous and incorrect idea.'—He affirms that the opake lens is expelled by the action of the muscles, as soon as the cornea is divided. p. 60. Yet, in a few pages further, we find that this expulsion is not so certain.

'I shall suppose that the section of the cornea has been duly made, and the cataract does not immediately follow. Some oculists have recommended that we introduce a curette into the pupil and enlarge it. This is an ignorant way of dilating the pupil. We ought simply to shut the eyelids, and cover the eye with the hand, so as to relieve the excitement of the eye, and by excluding the light, the pupil will be dilated, and ten to one but the cataract will be seen coming from under the eye-lids, on lifting up the flap of the cornea.' p. 68.

The lens has never been expelled, in the way described by

Mr. Bell, in the cases (not very few in number) operated on under our own observation. Mr. Ware mentions that he saw it happen once, 'without any external pressure:' Chirurgical Observations, Vol. I. p. 301. And he states further, that it never occurs in his method of operating. Ibid. p. 311, note.

'Hence it is found necessary to puncture the capsule, in order to facilitate the escape of the lens. If the operator, not aware of the necessity of this puncture, should press on the globe, when he finds that the lens does not come out, he will probably squeeze out the vitreous humour with the cataract, which we have seen done; and his patient will then probably lose his sight irrecoverably.'

We leave it to the reader to determine which of the two 'ideas' is the most 'incorrect and dangerous:' and, if Mr. Bell must bett odds on this subject, we strongly advise him to lay on the other side.

'After all operations on the eye, the patient must be condemned to darkness, and low diet; a wet rag be put on the eye; the bowels must be kept open'—'That inflammation which proceeds from the stimulus of the knife, should be treated with emollients, and the eyelids washed with tepid water.'

Query; are these emollients and tepid water to be applied over the wet rag, or under it? Our author, who does not scruple, on any occasion, to contradict most flatly in a second paragraph, what he had just asserted in the preceding one, adds;

'This lowness of diet, is not to be the universal order, but observing when there is a tendency to high action, or irritability of weakness present, we must half starve some, and give more generous diet to others. Above all, we must guard against the complaint being fostered and supported by confinement and bad air, low diet and despondence; for this reduces the system to that state which, though not actually disease, is particularly unfavourable to the cure of surgical diseases.' p. 78.

The following specimen of reasoning occurs in the observations on psoas abscess:

'Experience teaches us that a scrophulous abscess will seem to point, being soft and prominent, and having fluid evidently in it; and yet that when the lancet is thrust into this tumour, only a pale watery

fluid escapes, and the *walls* of the tumour acquire an inelastic, but irregular firmness, *like a cake:* and the progress of the action, or at least the softening of the tumour towards the surface, is not promoted, but checked. The scrophulous action is here, I suppose, of a slow and sluggish nature, and the phlegmonous action, the consequence of the wound, has somewhat of a contrary tendency, so that the original progress of the disease is not promoted.' p. 117, 118.

Is it by such effusions as these that Mr. Bell hopes, in the language of his preface, 'to reclaim his reader from a loose method of considering the subject?' and to 'chasten the propensity to those theoretical interpretations, which obscure the truth?' He is not more happy in his attempt to elucidate the diseases of the hip and knee joints. He says of the former, 'as to the cause, it is scrophulous disease,' p. 142; of the latter, 'to say merely that this is scrophulous disease, is saying very little.' p. 144.

The observations on fractures seem to be particularly valued by the author. A careful perusal has not enabled us to discover in these any thing superior to the rest of the work. A discussion of considerable length is employed to prove a point, which nobody doubts. After much parade about the periosteum and cellular membrane, coagula, callus, jelly, &c. we arrive at the following inferences, which, if they are not distinguished by novelty, will at least not be disputed.

'It is surely no erroneous conclusion to draw, that motion, to a certain extent, will destroy the disposition in the action to unite the bones by bone; and that in a lesser degree it retards the cure, and makes the confinement longer, increasing the chances of failure.' p. 171, 172.

Having brought a charge against the author, of neglecting the labour of his predecessors, we must, in justice, make one exception to our accusation. Dislocation of the horn of the os hyoides, from swallowing too large a mouthful, is actually described from Valsalva; and directions are seriously added for its reduction!

The maxim of Pliny, 'nullum librum tam malum esse, quin aliquid boni contineat,' has induced us to search for some extract, that might be more favourable to the author, and instructive to the reader, than the preceding quotations

The following remarks on gunshot wounds are the most interesting that we could select, and render the common opinions, concerning the great probability of secondary hæmorrhage, very questionable. Speaking of the wounded men brought from Corunna, Mr. Bell observes:

'It is singular, that of all the hundred wounds of balls in these wards, with the sloughs hanging from the wounds, there is no instance of hæmorrhagy. In succeeding mornings I find still the same expressions in my notes. Now the slough is just coming out of several of these wounds; in cases, too, where I should imagine the artery must have been touched, yet in bringing the men ashore there has been no bleeding. I see a man wounded in the sartorius, very near the femoral artery. I see a man wounded where the ball has entered by the side of the insertion of the deltoid muscle, and passed out by the back of the arm: it must have gone betwixt the bone and the artery. I see another just brought in where the ham-string tendons are perforated, and it is miraculous that the popliteal artery could escape; yet in these instances no blood flowed in the coming away of the sloughs.'

After specifying some other instances, he adds,

'My inquiries were at last suspended. I found no instance of secondary hæmorrhagy. I began to think it was equally incorrect to say that every artery touched with a ball must slough and bleed, as it is to say, that every bone touched by a ball must exfoliate.' p. 360, 361.

The patience of our readers will be exposed to a severe trial by our anxiety to justify the unfavourable sentence, which a sense of duty has obliged us to pass on the labours of Mr. Bell:—his public character required this. We have not remarked upon a tenth part of the passages which require animadversion, having designed to afford merely a specimen of the general execution.

The language deserves no more commendation than the matter: it is always careless, often ungrammatical. Words and phrases are employed in unusual senses; and some occur, with which we were before entirely unacquainted. Laques are mentioned in the reduction of dislocations, p. 232; and, in a fair specimen of the obscurum per obscurius, they are afterwards explained by the word hitches, p. 272. It just occurs to us, that laque may be a coinage of Mr.

Bell's from the Latin laqueus, a noose; but the synonym hitch has completely posed us. We do not comprehend '*gregate* incysted tumours,' even with the additional explanation of their being 'entangled in the cellular membrane.' p. 304. What can the author mean by the '*stool* of tumours,' p. 328? by 'parts being *assimulated* to the surrounding substance,' 325? by 'large abscesses forming and *dropping down* upon the loins, 126? by 'parts being thrown out of the *governance* of the general economy, 320?'

The necessity of characterizing the book in general, is almost superseded by our detailed examination: it presents a careless, superficial, and imperfect view of the subject. Yet, although it may seem that we have furnished evidence to the contrary, we feel convinced that Mr. Bell is not deficient either in abilities, industry, or zeal; and we ascribe his present failure to an ignorance of disease, and great haste. His prolific pen has sent forth no less than three publications within this year (1809.) Let him wait patiently, until he has learned disease; and then bestow on his compositions as many months, as he has bestowed days on this book, and he need not despair of producing something worth reading. But, if he persist in his present plan, his works will inevitably be regarded, like the razors immortalized by Peter Pindar, as being made to sell.

ART. II. *Observations on Fungus Hæmatodes, or Soft Cancer, in several most important Organs of the Human Body: containing also a Comparative View of the Structure of Fungus Hæmatodes and Cancer. With Cases and Dissections.* By James Wardrop, F. R. S. E. Fellow of the Royal College of Surgeons, and one of the Surgeons of the Public Dispensary, of Edinburgh. 8vo. pp. 205. Illustrated by Plates. Constable and Co.

A PECULIAR affection, first distinctly pointed out by Mr. Burns* of Glasgow, was called by Mr. Hey,† who published

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* Dissertations on Inflammation, 1800.

† Practical Observations in Surgery, 1803.

several accurately detailed cases of Fungus Hæmatodes: and an analogous disease was described by Mr. Abernethy* under the name of Medullary Sarcoma. A certain change in the structure of the testis has been called Soft Cancer. All these, together with some other examples of morbid structure, are included by the present author under a common denomination; which has grown lately into very general use, although the first description of the disease, which it designates, is of so very recent a date. Several different, though perhaps analogous affections, are at present classed under the name of fungus hæmatodes; which, in its loose application to such a variety of cases, affords, like those valuable terms, scrofula and cancer, a very convenient and imposing cover for our ignorance. The author falls in with the prevailing mode on this subject, and discovers so strong a disposition to detect the existence of the new affection, that his statements must be received with considerable caution. In an example of disease in the hand, related in the fifth volume of the London Medical Journal, and considered by Mr. Wardrop to have been fungus hæmatodes, it is observed, that a 'small steatoma' was found on the surface of the liver. On no other authority than that simple expression Mr. W. presents this to his readers as a fungus hæmatodes of the liver. The proofs of its occurrence in the kidney, lungs, and ovaries, are about equally satisfactory. A common specimen of the very frequent and well-known carcinomatous affection of the uterus, in its ulcerated state is described and delineated as a fungus hæmatodes of that organ. Chap. ix. p. 167.

The merit of this book, as a contribution to our knowledge of disease, will rest entirely on its second chapter, which contains an interesting and instructive account of a peculiar affection of the eye-ball, and occupies one half of the work. This disease, called by Mr. W. fungus hæmatodes, occurs at a very early period of life, twenty out of twenty-four instances having been in subjects under twelve years of age:

* Surgical Observations, 1804.

and it is distinguished by this circumstance from cancer of the globe. The pupil becomes dilated and immovable, and acquires a dark amber, or a greenish hue, so as to resemble the healthy appearance of the same part in many animals. This change of colour, which becomes more striking as the disease advances, is produced by a solid substance, formed at the back part of the globe, and gradually approaching towards the cornea. The form of the eye-ball is now altered, and the sclerotic coat assumes a livid appearance. Either the latter membrane or the cornea ulcerates, and allows the escape of a very rapidly increasing, soft, dark red or purple fungus, which bleeds profusely from slight causes, and is often covered with coagula. The most prominent portions of this production slough off, and their separation is attended with the discharge of an acrid and offensive sanies. The neighbouring absorbent glands are generally affected; and acquire, in some cases, a very considerable bulk.

Dissection discloses many important particulars. The retina is the only part affected in the early stages, and is changed into a peculiar soft matter, in which no remains of its natural appearance can be traced. In proportion as this growth extends, the humours are destroyed, and the choroid coat becomes involved; and at last the natural structure of the organ is entirely lost. We can confirm the author's opinion concerning the origin of the disease in the retina, by a case lately dissected, in which both eyes were affected. The complaint had made but little progress on one side, and consisted simply in the conversion of the retina into a soft irregular mass of a slightly red hue, occupying the middle of the vitreous humour, without filling the whole cavity. The choroid coat, ciliary processes and iris, and the sclerotica, were perfectly healthy; nor could any change be detected in the optic nerve. The author gives the following description of the substance, which forms the tumour in these cases.

'The morbid growth itself has, in almost every instance, more or less of the appearance of *medullary matter*. It is chiefly composed

of an opake, whitish, homogeneous substance, having the same degree of pulpy softness and tenacity with brain. Like brain, it becomes a soft pulp when exposed for a short time to the open air, mixes readily with cold water, and dissolves in it, and it becomes firmer and harder when boiled, or when immersed in alcohol or acids. When the softer parts are washed away in water, or when the mass is forcibly compressed, the more firm and solid parts remain. These consist of a filamentous substance resembling cellular membrane, which varies in its quantity and in the closeness of its texture. The consistence of the tumour varies, to a certain extent, in different cases, and in different parts of the same tumour, being in some not much firmer than common custard; whereas, in others, it is more firm than the most solid parts of a fresh brain. The colour is subject to considerable variety; most commonly it has exactly the colours, as well as the consistence of brain; sometimes a portion of it is redder, and has more of a fleshy appearance, and sometimes another portion resembles a clot of blood. I have also seen it of a dark brown colour, and, in one instance, both the tumour within the cavity of the eye-ball, and that exterior to it, were tinged of a deep black colour, only a few greyish-coloured streaks being interspersed through the dark mass.' p. 16, 18.

The optic nerve is changed considerably by the disease. It becomes firmer, and is variously altered in colour: sometimes, too, it is surrounded by a deposition of the morbid substance. The diseased change extends beyond the point of junction of the two nerves to the optic thalamus of the same side; which has been converted into a soft pulpy mass mixed with blood. The membranes of the brain have been slightly altered in some cases. The instance, which we before alluded to, presented a very extensive deposition of the soft medullary matter, under the pericranium, over almost the whole external surface of the skull; the bone being rough and spiculated in these situations. The consistence of this matter was soft, and its colour varied from a reddish white to that of coagulated blood. A similar and equally extensive deposition was found on the dura mater; and the surfaces of both orbits were lined by it. When the absorbent glands are affected, the appearances are similar in them; and soft tumours have been found in the liver.

The origin of the disease has been referred to a blow in many instances; while, in others, it has appeared spontaneously. At a very early period, the powers of the eye, as an organ of sense, are lost. The extirpation of the globe has hitherto been found entirely ineffectual; but it remains to be proved, whether the operation would be equally unsuccessful at a very early period.

The description of this disease is followed by seventeen cases, of which two occurred in the author's own practice, and the remainder were either communicated by his friends, or are extracted from various publications.

The third chapter, 'on fungus hæmatodes in the extremities,' does not contain any material addition to the information already before the public, on this subject. The medullary appearance of the original tumour; the varieties in its colour, from a pale gray, to that of the liver or coagulated blood; the formation of a bleeding fungus; the affection of the absorbent glands; and the occurrence of similar depositions in other organs of the body, are important points in the history of the disease, confirmed by Mr. Wardrop's researches. The constantly fatal event of all attempts at extirpating the tumour, has clearly shewn, that the only chance of saving the patient consists in an early removal of the whole limb.

The *pulpy* state of the testicle, described by Dr. Baillie, is considered as the same affection of that organ, with those already noticed in the eye and extremities. Slow and indolent in its progress, the tumour, when increased to a considerable bulk, is remarkable for its softness and elasticity, so as to give the sensation of fluctuation. The same character belongs to the swelling in the extremities; but it is the most remarkable in the testis, where the author has known many instances of its being mistaken for hydrocele, and treated accordingly. The absorbent glands become affected, and are enormously enlarged within the abdomen, in the course of the aorta and vena cava.

'In no case,' says the author, 'have I ever been able to learn, that the integuments of the scrotum have given way, and a fungus grown from the diseased testicle.' p. 129.

These cases have invariably terminated fatally.

The remaining chapters on fungus hæmatodes in the liver, spleen, &c. and the 'comparative view of fungus hæmatodes and cancer,' really contain nothing worthy of observation.

The facts, which Mr. Wardrop has collected, prove that a peculiar disorder, hitherto imperfectly described, takes place in various parts of the body, and exhibits nearly the same appearances in organs of different situation and structure; that it is propagated to the absorbent glands in most cases, and often when it has begun in the eye, testis, or extremities, affects at the same time some of the viscera; and that it has not yielded to any mode of treatment. Its character and progress are so different from those of cancerous affections, that a very little attention will be sufficient to discriminate them; although the uniform fatality of the fungus hæmatodes has occasioned it to be confounded with cancer in many instances.

Our opinion of this production may be easily collected from the preceding observations. The author would have consulted the interest of his readers, and his own reputation, more effectually, if he had published separately the remarks on the eye; which, independently of the extracts from other works, might have been comprised in a very narrow compass. There is every kind of internal evidence, to shew, that the remaining parts were added for the purpose of making out a sufficient bulk for a volume: and the result of this book-making process affords the reader a very inadequate proportion of matter for his twelve shillings. The accompanying plates are, for the most part, very deficient in character: and several of them would convey as clear ideas of any disease in any parts, as of the particular subjects which they are designed to elucidate. We do not mean, by these observations, to convey any disrespectful opinion of Mr. Wardrop's abilities. He appears to possess industry, and a laudable desire to improve his profession: but his appearance before the public, on the present occasion, is premature; and obvious traces of haste occur in many parts of his language and reasoning.

ART. III. *Practical Observations on Strictures of the Urethra, with Cases illustrative of the Comparative Merits of the Caustic and common Bougie; also, Remarks on Fistula in Ano, and an improved Method of Treating Tinea Capitis; with annexed Cases.* By Thomas Luxmore, Surgeon Extraordinary to the Prince of Wales, Surgeon to the Eastern Dispensary, &c. 8vo. pp. 215. Highley.

ART. IV. *Letters Concerning the Diseases of the Urethra.* By Charles Bell. 8vo. pp. 149. With Six Plates. Murray.

IF the knowledge of a disease were in a direct ratio to the number of treatises on it; strictures of the urethra ought to be perfectly understood by the modern surgeon: for on no subject has a greater number of pens been employed. Again, if the prevalence of the most opposite opinions concerning the causes, nature, and treatment of a complaint, prove that it is imperfectly known, the position may be exemplified by the same affection. In truth, the subject has received no additional illustration since the writings of Hunter and Home. All the subsequent publications are mere waste paper; and the two present pamphlets, like the preceding lucubrations of B. Bell, Whately, Andrews, and Wadd, must either 'lie in cold obstruction' on the shelves of the bookseller, or fulfil a more active destiny when conveyed 'in vicum vendentem thus et odores.' We do not mean to assert that our information on strictures is complete. An accurate description of the various forms, under which the complaint appears, derived from actual examination in the dead subject, and an explanation of the effects produced by the common and the armed bougie, drawn from the same source, are still desiderata, which neither of the publications at present under review supplies in the smallest degree.

Which of the two authors, in the present instance, has accomplished his task of writing a book at the smallest expense of intellectual exertion;—which of the two publications contains the least proportion of new or interesting matter;—and which is least worth the money;—are prob-

lems which we do not attempt to solve, from a fear of deciding wrongly, when the pretensions are so nicely balanced on both sides. We shall enable our readers to determine for themselves on one of these points, by laying before them the most novel matter that we can discover in each work. After using a bougie for a certain time at the commencement of the treatment, Mr. Luxmore proceeds to employ the catheter or sound until the cure is completed; but he has not imparted to us the motives for this practice. p. 66. Mr. Bell uses an instrument, consisting of a silver globe at the end of a thin wire, for examining the passage, and calls it an urethra sound. p. 35. As this had been already described and delineated in a preceding work, the necessity of publishing it separately is not very obvious. The particular cases in which the new sound should be used, and the advantages of its employment, are not specified. For a particular account of the manner of using it, we are referred to the 'System of Operative Surgery,' Vol. I. This is altogether one of the most barefaced experiments on public *gullibility* that has fallen under our notice. After paying three half-crowns for learning that the urethra ought to be examined by means of little balls, we are to incur a further loss of eighteen shillings if we would know how these balls are to be pushed in! This is well done: it is a good bold attempt, and deserves success. If the public tolerate it, they will have no right in future to complain of any manœuvre by which Mr. B. may attempt to force his trash down their throats.

Mr. Luxmore's book might have been written by any given surgeon and apothecary. It contains twenty-two common cases of stricture, minutely detailed; and each is followed, under the head of remarks, by a recapitulation of the leading points, with the trains of reasoning by which the author found himself justified in the administration of each dose of jalap, Dover's powder, &c. These invaluable records are preceded by an anatomical description of the urethra, executed in a style to correspond with them. The necessity of this addition does not appear very clearly, if, as the author states, 'every anatomical writer is sufficiently copious on the

subject. Two makeweights, on tinea capitis, and fistula in ano, are thrown in at the end: of these, we shall say no more, than that they reminded us of Falstaff's reflection on his raggamuffins; 'they 'll fill a ditch as well as better men.'

Mr. Bell, as is usual with him, sets out with very magnificent pretensions. He has 'facts to communicate, which are of the first importance in practice.' He has 'conducted all his inquiries upon grounds ascertained by anatomical investigation; brought forward facts which cannot be questioned, and reasoned candidly on these facts.' That he has dissected a very few diseased urethræ appears probable; but he cannot give a plain account of what he has seen, and he buries his two grains of wheat under such a disproportionate quantity of chaff, that it is very hard to find them. The three letters, which compose the work, contain a miscellaneous assemblage of observations on the causes, structure, pathology, and treatment of strictures, which seem to be purposely jumbled together. If the subject was obscure before, it is now 'confusion worse confounded.' How will the student ever recognise all the distinctions and divisions noticed in this work? Not contented with permanent and spasmodic strictures, he has also simple, ulcerated, dilatable, and callous strictures, besides others from inflamed lacunæ, stone, and wasting of the spongy body; not to mention a 'choaking-up of the canal by a crust of coagulable lymph.' p. 5. To specify the absurd trifling, which characterizes most of the remarks, and the numerous contradictions which they involve, would occupy too much of our time. We shall merely inform our readers of three incidental discoveries, which the perusal of Mr. Bell's discoveries has disclosed to us; viz. that effusion on the surface of the brain and in the ventricles, is a consequence of stricture, (p. 62;) that inflammation renders the bones soft, (p. 62;) and that, when any set of muscles is contracted, their antagonists are brought into a state of *negative activity*. p. 110. We were on the point of noticing 'marrow-piercing irritation,' (p. 94,) as a new physiological discovery; but it seems doubtful whether the author alludes here to any effect actually produced on the

medullary structure, or employs the phrase merely as a figure of speech.

ART. V. *A Dictionary of Practical Surgery: containing a complete Exhibition of the present State of the Principles and Practice of Surgery, collected from the best and most original Sources of Information, and illustrated by Critical Remarks.* By Samuel Cooper, Member of the Royal College of Surgeons in London, and Author of the First Lines of the Principles and Practice of Surgery. 8vo. pp. 749. Murray.

IN strict language, the title of Dictionary implies merely an explanation of terms; the Author of the work before us has used it in a much more extensive sense, and therefore, as it appears to us, improperly. On this point, however, we are not much disposed to find fault with him; first, because it is in itself a matter of trifling importance; and, secondly, because he is by no means singular in the misapplication; and we may well excuse a surgeon for an offence against the strict laws of language, of which so many literary persons have been guilty before him.

The present work, to which the title of Dictionary has been affixed, is a system of surgery, in which the various topics treated of are arranged in alphabetical order. In reviewing it, three questions present themselves: first, whether this is an eligible arrangement for a systematic writer to adopt; secondly, how far systems of surgery in general are or have been of service in augmenting the general stock of surgical knowledge; and, lastly, what are the individual merits of the book before us, when compared with others of the same kind.

With regard to the first of these questions, we are decidedly of opinion, that an alphabetical arrangement is by no means the most eligible for a systematic work. The observations which have been made within the last fifty years have enabled us to refer the phænomena of surgical

diseases, and their mode of treatment, to general principles, and consequently have elevated surgery, from a mere empirical art, to the rank and dignity of a science. This alteration in the state of surgery, which the discoveries already made have produced, is undoubtedly calculated to repay us with interest, by leading to still further discoveries and improvements. We therefore conceive, that in all works on surgery, but more especially in systematic works, the authors would do well to keep this consideration in view; viz. that surgery is a science, and should be studied and treated as such. Now, an alphabetical arrangement appears to us to be of all others the worst calculated for this purpose. What should we think of a lecturer on surgery, who delivered three lectures in succession on Fractures, Fungus Hæmatodes, and Ganglions, because these terms followed each other in alphabetical order? The meanest tyro in the profession would laugh at such an arrangement; and we certainly do not understand, why it is better adapted for a written system, than for lectures. We were at first surprised, that these reflections did not occur to Mr. Cooper; but a little consideration explained the mystery. Mr. Cooper has already published one system of surgery, under the title of '*First Lines.*' It seems that he afterwards had a fancy to publish a second system: and, in order that he might make a little variety between the two, he has adopted for his second publication a different arrangement, and bestowed on it a different title. That in this Mr. Cooper has shewn his ingenuity, we will not pretend to dispute; but we cannot give him credit, in this instance, for dealing fairly with the public. If he has acquired any knowledge in his profession, which he did not possess when he published his 'First Lines,' why has he not reserved it for a new and enlarged edition of that work, that he might render it as complete as possible? If, on the other hand, he possesses no new information, what good purpose can it answer, to give to the public a work with which he has supplied them in another form?

With regard to systems of surgery in general, we confess, that we entertain a very mean opinion of their utility. Sur-

gery presents so wide a field for study, that we do not believe, whatever some system-writers may pretend, that the usual period of human life affords sufficient experience to any individual, even though he possess the greatest opportunities, to enable him to publish, from his own observations, a work that shall include every branch of the science. A system of surgery, if composed by an individual, must be either entirely, or, for the most part, a mere compilation from the writings of others. Such a compilation may perhaps be useful to the half-educated pupil, who wishes, according to the vulgar phrase, to be *crammed* before he undergoes the examination which is to qualify him for the situation of hospital mate; but, beyond this, we are at a loss to understand what good purpose it can answer. On the contrary, it appears to us, that books of this kind are decidedly injurious to the advancement of surgical knowledge, as they lead the student to be contented with selections and abridgements, instead of studying the original works of the great masters in the profession; as they lead him to a superficial and imperfect knowledge, communicated perhaps, at the same time, in so lofty a tone, and in so imposing a manner, that he supposes himself to be learning all that is to be learned in his art, and goes into the world ignorant of his profession; and, what is worse, because it precludes improvement, unconscious of his own ignorance.

The consideration, however, of the general merits of works of this kind, is distinct from that of the comparative merits of the system before us: though we do not approve of the class of books to which it belongs, we willingly admit that it is free from many of the faults which are inherent in other systems; and that it contains many good qualities, which other systems do not possess. The style is clear and perspicuous; the observations are chiefly confined to practical points; references are made to the best authors, and the quotations from them are selected with much judgment. It is not disfigured by the tone of assumption, (we might say of arrogance,) which offends us in some modern systematic works; and we know of no publication in which so much practical instruction, and so large a share of the doctrines of the best

writers, are compressed within such a narrrow compass. Therefore, if the student is determined to have some system of surgery, we do not believe, that he can provide himself with any that will prove more useful to him than Mr. Cooper's Dictionary.

As this work, however, does not profess to contain original matter; and as the greater part of it consists of quotations from other writers; we shall not enter into any minute examination of its contents, but will conclude our strictures with recommending to the author, instead of compiling books, which relate to every thing, and which must, therefore, be superficial, to confine himself to particular parts of surgery. By so doing, we may venture to predict, that his industry and talents will procure for himself more lasting reputation, and confer upon the world much greater benefit.

ART. VI. *A Treatise on Local Inflammation, more particularly applied to Diseases of the Eye, wherein an Improvement in the Treatment of those Diseases is recommended, which has been confirmed by numerous Cases under the Author's own Care.* By J. B. Serney, M. D. Oculist. pp. 128. Miles. Oxford Street.

'THE proximate cause of inflammation,' says Dr. Serney, 'is commonly taught to be an increased action and circulation in the vessels of the part affected.'—'On the contrary, it is the *very reverse:*' for by this hypothesis it appears, that, in instances of local inflammation,

'The throbbing pain and pulsation remain unexplained: but by supposing the proximate cause to be a diminished action and circulation in the part affected, arising from the immediate laceration of minute vessels, receiving still further obstruction from the effused fluid accumulating in minute cavities; thereby occasioning a diminished action and circulation in the part affected, and with a tendency to produce an increased circulation in the neighbouring sound parts, in consequence of the arterial circulating equilibrium being deranged and diminished in the diseased part. The whole of the symptoms, on

the above hypothesis, can be accounted for through the several stages of acute and chronic inflammation.' p. 4, 5.

Now, as it appears to us extremely easy to explain both *the throbbing pain* and *the pulsation* upon the old hypothesis, and extremely difficult to make either sense or English of Dr. Serney's history and illustration of his new one, we really cannot help expressing our regret that he has given himself so much useless trouble. We are sure it must have been infinitely tedious to arrange and connect the intricate arguments adduced, so as to be understood even by the author himself; and we indeed fear, that, notwithstanding the judicious employment of great A and little a, and the remainder of the numerous class of references, his reasoning will not be found sufficiently clear to be comprehended by any of his readers. We are aware, that, in some of the finer arts, the *chiaro-oscuro* is deemed a great beauty, and that, in some writings of taste, an analogous attempt may be employed with advantage: but in a work professedly written for the improvement of the eye-sight; which is to render that evident which was before clouded in mystery; which is to 'bring into a closer point of view the scattered opinions of many authors, but which are insulated and only hinted at in a variety of medical books:'—the obscure, however fascinating or convenient, should have been omitted, and more especially those dark shades of it with which this book abounds. It does not require our assistance to point them out, and we really have neither patience nor ability to attempt the disclosure of their hidden beauties. The foundation of our author's hypothesis has already been given, and this alone presents a tolerable specimen of his powers in the obscure, and would probably be deemed sufficient to satisfy the majority of our readers: for the remaining few, however, who may be inclined to follow the author somewhat further, we shall extract his '*Recapitulation of the Progress of a local Inflammation*,' in which he has 'subdivided the proximate cause of a local inflammation into *fourteen* collateral and accessory causes, or different successive actions.'

'It would appear, that a local inflammatory affection, occasioned by cold, checked perspiration, violent exercise of the body or mind, is at first produced by an increased impetus of blood to the part, which is become vicarious, for the time, of the whole system (thus differing from those occasioned by other external causes); and this inflamed part, if reduced by resolution or absorption, will run from the commencement the following course, in fourteen stages or different actions. 1st, an increased impetus of blood to the part to be inflamed; 2d, congestion in consequence; 3d, laceration of minute vsesels; 4th, effusion and swelling in many *incarcerated cavities;* 5th and 6th, intercepted circulation, with an increase of heat; 7th, vicarious actions of enlarged and elongated vessels, with redness round the part; 8th, the contraction and healing of the lacerated vessels; 9th, the absorption of the thinner part of the blood effused; 10th, the death and decomposition of the effused and incarcerated particles of red globules; 11th, the absorption of the same; 12th, the gradual contraction and obliteration of the vicarious vessels near the part affected, and the disappearance of the redness above mentioned; 13th, the reproduction of entirely new vessels, through the remaining coagulum of the blood unabsorbed, which was effused in the incarcerated cavities of the most injured parts; finally, 14th, the complete restoration of the circulation, and the perfect cure of the inflammation.' p. 44—46.

Query. Would not the arrangement have been more elegantly complete, if the inflamed part had been made to manœuvre through twenty-four subdivisions?

ART. VII. *An Essay on the Nature and Treatment of the Malignant Contagious Ulcer, as it generally appears in the British Navy.* By James Litle, Surgeon, R. N. 8vo. pp. 83. Highley.

THIS little tract contains many excellent practical observations, and much useful information. The form, which the author has chosen, is well calculated to convey instruction at an easy rate: for, instead of forcing a huge volume upon the public, after the manner of book-makers, he has modestly contented himself with an *essay,* in which the result of his

personal experience only is detailed. When we find professional men, holding official situations, anxiously bringing forward, in this manner, the fruit which their advantages enable them to gather, we give them full credit for the motives which prompt them to publish: and we do not doubt that many of them (particularly in the navy) have already reaped a considerable part of the reward due to their industry, in witnessing the manifest improvements which have taken place in their respective departments.

Our author opens his pamphlet with a short prefatory discourse (as he terms it), in which he points out some of the more general causes, by which contagious disorders have been found so prevalent and destructive, when large bodies of men have been collected together, and where those precautions have been neglected which he deems essential to the preservation of their health. In this part he certainly presents us with a most pleasing view of the improved state of our navy in these respects. '' Such,' he observes, 'is the neatness of hospital berths in ships of the line, that they are commonly shewn to visitants, as the criterion by which the good or bad economy of the ship is estimated. Such also, in general, have been the zeal and industry of the medical officers of the navy, that their practice has of late years been improving in an uncommon degree.' p. 7.

The author then devotes a few pages to the consideration of the simple purulent sore, which he thinks may sometimes, among seamen, prove the precursor of, or degenerate into, the malignant contagious ulcer, which is the subject of the remainder of the essay. When speaking of the occasional obstinacy of these simple purulent sores, he remarks, that it has been too frequently 'attributed to the tricks and chicanery of the unfortunate patient, for the purpose of evading duty, as ultimately procuring his discharge from the service.' p. 14. In this opinion we cannot help agreeing with the author, who with much propriety conceives, that 'unless the surgeon be very superficial in his observations, escharotics, clandestinely resorted to in keeping open sores, cannot long remain undetected.' Other means of deception, how-

ever, certainly are occasionally employed with success. 'The *immedicability* of such sores,' (a term, by the bye, which is scarcely legitimate,) the author conceives may more frequently be traced to a scrofulous habit of body, than to a scorbutic affection; and, in his endeavours to heal them, he relies principally upon cleanliness, an equable pressure over the whole limb, and gently astringent lotions; followed by attention, after the ulcer has healed, to such means as may appear likely to supersede the necessity of a vicarious discharge, till the secretions resume their natural course, and the system recover its wonted tone.'

In the second chapter, which professes to treat of the pathology of the malignant ulcer, the account of the appearances, which the ulcer assumes in general, and the history of its progressive advancement, are not detailed with sufficient accuracy to enable us satisfactorily to distinguish the complaint: we are informed, that

'It is a fever *sui generis;* a contagious fever; attended, like other complaints of that nature, with direct debility from the beginning, and considerable morbid action of the sanguiferous system. The ulcers and sores are only symptomatic of a morbid catenation in the vital system, and the fever assumes *much* the characteristic symptoms of regular typhus; having commonly a remission in the morning, and an exacerbation towards the evening.' p. 23.

In the third chapter, the author insists upon the specific and contagious nature of the species of malignant ulcer, which he is describing, though its inveteracy is much influenced by certain predisposing causes, as scrofula, debility, &c. and is farther increased by the presence of many powerfully exciting causes, to which British seamen are exposed; some of the more remediable of which he particularly specifies. He conceives, that the

'Washing of the decks so very frequently in this country, during the prevalence of the Levant, or easterly wind, is attended with a twofold mischief. The evaporation from a wet deck must, for a considerable time, supply humidity to the atmosphere in such a confined space, which will ever be found highly inimical to health. And the

chill produced by having the feet so long (during several hours) immersed in cold water, has an immediate effect on the system, and is found to be of itself productive of disease.' p. 34.

Excessive fatigue, depression of mind, and all other irregularities that tend to exhaust animal energy, are likewise pointed out, as exciting causes, which assist in the propagation of the disease through the navy. The conclusion of this chapter strongly marks the author's conviction, that a mere attention to the local symptoms, in these disorders, will never be found sufficient to keep them in check.

'Many,' says Mr. L. 'are the instances I have witnessed, of that melancholy change which takes place for the worse in wounds and sores, when removed even from a ship to the foul air of an hospital ward. The naval surgeon, who with the most unremitting assiduity treats it as a local disease, will find himself miserably disappointed. He will rack his brain in recollecting every nostrum and application he has ever heard or read of, to no purpose; he will continue to labour, and continue to wonder, day by day, that his applications have not had the desired effect, whilst his patients are perishing, or losing their limbs under his hands.—He may exhaust ingenuity in dressing those sloughing gangrenous sores; but as long as his patients are absorbing the poisonous principle by the lungs, and surface of the sores, his efforts will prove ineffectual; at least as long as his attention is directed only to the locality of the disease.' p. 38.

In the fourth and fifth chapter, the utility of ventilation and attention to regimen are more particularly enlarged upon. 'A moderate quantity of light, easily digestible food, with a due proportion of acescent vegetables, may be allowed; not taken at once, but at different times during the day;' as food thus taken does not so readily run into the fermentative process.—Fresh bread, a moderate portion of ripe fruit, sago, wine given in repeated small quantities, with lemonade, gruel, &c. for common beverage, are recommended.

The treatment of the disorder, both medicinal and local, is considered in the three following chapters.—Purgatives are recommended as essentially necessary, but those of a milder nature are preferred.—To the use of calomel, both

in this disease, and in the common typhus of a British climate, though aware of the value of this admirable medicine when judiciously employed, the author objects, but principally upon hypothetical grounds.

'It certainly has a powerful effect, (he observes) in disencumbering the alimentary canal of its sordid crudities, and inciting the hepatic and alimentary organs into action; but, during the time of its performing that office, a considerable portion of the medicine' [which] 'enters the lacteals must be taken up and enter the circulating system,—and, from the constitutional susceptibility at this time existing, must produce a considerable effect; it must add to the action of the vascular system, already in high excitement, and consequently increase debility.' p. 52.

Tonic medicines, likewise, are mentioned as highly beneficial, particularly the cinchona, or the willow bark, (cortex salicis fragilis,) as a substitute for it; and the tincture of muriate of iron. The effervescing saline draught with camphor, yeast, from its well-known antiseptic powers, and opium, for the relief of pain, are enumerated among the remedies, which may be employed, but without much discrimination in regard to the circumstances which indicate their exhibition; and the author mentions some cautions, in regard to the use of emetics and venesection, which, in a disease of such a typhoid character, must be deemed altogether out of place. In his topical applications, the author does not appear to deviate from the plan which would be recommended by most practical surgeons: they must of course be varied, according to the peculiarities of the case. Much reliance, however, appears to be placed on warm fomentations, with the skilful application of a soft and pliant roller. Circumstances may arise which may render an amputation necessary; but these, Mr. Litle conceives, are much more rare than the too frequently adopted practice in these cases appears to justify: and he affirms, that 'a change of situation will often effect more than the knife.'

ART. VIII. *The Surgeon's Vade Mecum; containing the Symptoms, Causes, Diagnosis, Prognosis, and Treatment of Surgical Diseases, accompanied by the Modern and approved Methods of Operating, Select Formulæ of Prescriptions, and a Glossary of Terms.* 8vo. pp. 269. Murray.

THE writers of the present day have certainly a wonderful talent of compressing their knowledge into a small compass. We have already had occasion to notice, a Compendium of Surgery. Here is a *compendium* of a *compendium*, in which the whole art and mystery of surgery is explained in about 270 duodecimo pages! Whoever wishes to take the short cut to surgery, has only to purchase 'The Surgeon's Vade Mecum,' and read it two or three times over on his first leisure evening: or if he cannot conveniently afford so much time at once, he may put it into his waistcoat pocket, and look into it every now and then, when he has ten minutes to spare. How fortunate are we who live in the present Augustan age! who possess so many high roads to knowledge! so many ladders to learning! No one has an excuse, now-a-days, for being ignorant of surgery, or of any thing else; for who is so poor that he cannot lay out six shillings in purchasing some of the vade-mecums, or pocket-books, or compendia, with which the press abounds?

To be serious:—we will not pretend to say that this work is ill executed; we will not quarrel with the individual book before us; but to the kind of book we have a decided objection. We cannot understand what good purpose it can answer. It is said to be intended for students, and young practitioners. If a student or a young practitioner know nothing, we venture to affirm, that he will not be rendered much wiser by reading such a compendium: he may get a smattering of learning; but no knowledge that will be found practically useful. If, on the other hand, he know any thing, he must know more than so small a work can contain.

If such works, as that under review, dropped still-born from the press, and were left to moulder in the publisher's warehouse, until disposed of as waste paper, we should have

no right to make complaints about the matter. The loss would be that of the author and his bookseller; the public would sustain no injury. But the misfortune is, that they sell, and go forth into the world, filling the place of better and more useful publications. Ignorant young men buy pocket-books and vade-mecums, and think that they derive knowledge from them; and, thus qualified with the assistance of a few lectures, they offer themselves to the public, as candidates for the honourable and responsible office of medical practitioners.

It would be difficult to form a judgment of the comparative merits of a work like this, where the whole of the symptoms and treatment of every stage of the Lues Venerea, for instance, is contained in ten small pages; and where every thing else is on an equally minute scale. Of the anonymous author we declare ourselves to be entirely ignorant. Whoever he may be, we beg him to consider the observations which we have been called upon to make, as of a general nature; not applying, nor intended to apply to his publication more than to five hundred others: and we repeat, that we find fault, not with the book itself, but with the class of books to which it belongs.

ART. IX. *The Principles of Midwifery, including the Diseases of Women and Children.* By John Burns, Lecturer on Midwifery, &c. at Glasgow. 8vo. pp. 519. Longman and Co.

THE art of midwifery is so immediately connected with the preservation of the species, and seems, at first view, so capable of being reduced to fixed principles, that it might have been expected, *a priori*, to have outstripped the other branches of medical knowledge in its growth to perfection. From the co-operation of various causes, however, it was, in a great measure, neglected: and having been abandoned to females and to inferior practitioners, it is only of late years that it has assumed the respectable station which it now occupies in the profession of medicine.

We are by no means destitute of works on midwifery: we possess many of approved excellence and established reputation; but a treatise on the comprehensive plan of the present work, and possessing those first requisites of an elementary system, clearness of arrangement, conciseness, and, at the same time, perspicuity of description, accuracy of observation, and decision without arrogance in the practical precepts, continues, notwithstanding Mr. Burns's book, yet a desideratum. The author has, however, the merit of avoiding some of the errors of his predecessors; and has not loaded his pages with the absurd attempts at physiology, and the puerile trash, under the form of theory, which ekes out an hitherto popular work on the same subject.

The volume before us is divided into four books. The 1st treats of the structure, functions, and diseases of the pelvis and uterine system, in the unimpregnated state, and during gestation. The 2d comprehends parturition, under the several heads of natural, premature, preternatural, tedious, *instrumental*, impracticable, and complicated labours. The 3d treats of the puerperal state and its diseases; and the 4th book is allotted to the diseases of children.

In the dry business of anatomical description, Mr. Burns certainly does not excel: he is very deficient in the faculty of relieving a tiresome subject by clearness of style, or felicity of expression; nor has he the talent of conveying to his reader a distinct idea, in a short compass, of the object he is describing. He is, on some occasions, prolix without being full, and copious without being comprehensive; while, on others, he is improperly concise, and, in labouring to be brief, sometimes becomes obscure.—The first, and a large portion of the work, is occupied by the diseases of the female generative organs: they are described in general with accuracy, and the treatment recommended is judicious. In phagedæna of the labia, however, we differ from Mr. Burns as to the use of stimulants. This is a formidable disease: and in crowded hospitals, or in the confined dwellings of the poor, amidst the squalor and intemperance usually attendant on low prostitution, it is very commonly fatal. It is a frequent

effect of the irritation of venereal virus in a debilitated constitution; but is oftener produced or aggravated by the excessive or injudicious exhibition of mercury. It is thus described in p. 43.

'It commences with a livid redness of the part, succeeded speedily by vesication and ulceration, which extends laterally, and sometimes penetrates [deeply]. The ulcer has an eating appearance, is painful, discharges a great quantity of matter, and very often is attended with fever.'—'Phagedæna generally requires stimulating applications, such as red precipitate, caustic—(Quære, what caustic?) camphorated spirits, or oxymuriate of mercury, mixed with lime-water; but if these increase the irritation, we must foment the sore with decoction of chamomile-flowers, mixed with a little tincture of opium, and then apply mild dressings. Rest is essential to the cure,' &c.

As far as our experience goes, stimuli are injurious: we have seen a single application of nitrate of silver re-excite the morbid actions of the sore in such a degree, as to occasion the death of the patient. Opiates given freely and at stated intervals, wine in moderate quantities, a light infusion of bark, or mineral acids, internally, and the mildest local applications, have seemed to succeed best.

The diseases of the uterus are treated in too cursory a manner; but we must except from this censure the section on inversio uteri. In the extraction of a polypus from the womb, the author recommends the ligature to be carried round the tumour, and fixed by the intervention of a double canula; the tubes of which are made to separate and unite at pleasure, by 'a correcting base, or third piece, which can be adapted to them like a sheath.' The description of the instrument is taken from a French treatise on circumscribed tumours of the vagina and womb, by M. Lefauchaux.

From the attention which Mr. B. had previously devoted to the subject, we expected that the section on abortion would have been particularly satisfactory; but we were much disappointed at being referred to the treatise which he formerly published. This looks like a trick of authorship, and deserves reprehension.

Hæmorrhages, especially those proceeding from the attachment of the placenta over the *os uteri*, form, beyond all comparison, the most urgent and important cases in the practice of midwifery. No where is promptitude and decision more required: in no instance is the man of science more distinguishable from the mere pretender: in no predicament is the conduct of the surgeon more the object of present attention, nor of subsequent scrutiny. Upon this subject, therefore, it is peculiarly incumbent on a teacher of the art to state the practice to be pursued, with distinctness and precision;—and here we think that the present author has failed. He hesitates, and qualifies, and intrenches himself so cautiously behind authorities and provisos, that a student might be led to expect that he would have time for all this deliberation in the lying-in chamber. But it will be in vain to think of recurring to lectures, or balancing authorities, when the case demands immediate assistance. Vacillation and delay, always to be reprobated, may here be fatal. The student's mind should be thoroughly prepared, that he may not excite the suspicion of inexperience by hesitation or confusion; but act with a firmness, and at the same time with a caution, that may secure to him present confidence and future approbation.*

In dropsies of the ovary, Mr. Burns proposes 'tapping the cyst early' from the vagina, and by injections, or other means (what other means?) to endeavour to promote a radi-

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* In justice to the author, we insert the following passage of a note which he has added at the end of the volume; as it seems to imply a consciousness of not having spoken with sufficient clearness in the body of the work. 'Although I have said, that we may safely wait until the os uteri begins to open; and asserted, that as no woman can die from mere hæmorrhage, before the state of the os uteri admits of delivery; I must yet add, on this important subject, that this state does not consist merely in *dilatation*, for it may be very little dilated, but in *dilatability*, and we may safely deliver whenever the hand can be introduced without *much force*.' The note is too long for complete insertion; but it well deserves perusal, and contains a far better summary of the doctrine and practice on this essential point, than is to be met with elsewhere in the treatise.

cal cure. The attempts at injecting large ovarian dropsies, will scarcely, we should hope, be repeated even in this age of experiments: and as to the proposition in question, the author has himself given a sufficient reason against it, at the distance of a few lines. 'The ovarium, in this disease, contains, in general, many cysts; and as these, in the first stage, are small, we can only hope to open the largest.'

The sections on the different varieties of labour, and the first in particular, are executed with much ability: but it struck us, on the perusal, that examinations per vaginam, and manual assistance, are recommended somewhat too frequently. These are steps to which young practitioners are perhaps too much inclined; and they require to be reminded, that labour is in itself a natural process, and, unless mechanical obstructions exist, will generally be best accomplished by the undisturbed natural efforts.—In the chapter on *instrumental* labours, the author seems to lean to the vectis. For ourselves, we prefer the forceps: but a statement of the comparative advantages and defects of the two instruments might, with propriety, have been introduced. Throughout the work, Mr. B. is rather sparing of giving any opinion of his own.

In noticing the Cæsarean operation, it is said that the 'hæmorrhage is not great, and has scarcely ever been fatal.' In an unhappy case, which lately fell under our inspection, the patient died in half an hour after the operation; and on opening the body the abdomen was found distended with coagula, as well as the cavity of the womb. The very rapid contraction of the uterus, too, causes such a protrusion and exposure of the bowels, and creates a necessity for pushing and handling them so freely, as to render inflammation almost an inevitable consequence, even if the woman should survive the immediate effects of the operation.

The remarks on puerperal convulsions seem rather objectionable. Very often it would be highly imprudent to wait for the effects of a blister on the scalp. If, after copious bleeding, and evacuating the bowels, the symptoms continue unabated, we must resort to delivery; and, by prudent efforts,

hasten its accomplishment. But, while we deprecate unnecessary and dangerous procrastination, we are equally inimical to precipitate or violent attempts to dilate the os uteri.

In the management of women in child-bed, we dissent from the author's plan of confining them so long to a recumbent position. On this point, our sentiments coincide with those of Mr. White, of Manchester: and we are convinced, that where the labour has been easy, it is advisable that the patient should, at least, sit up in bed, and vary her posture frequently. In the present mode of conducting these matters, there is not much hazard of her rising so soon as to endanger 'a prolapsus uteri, or an excessive lochial discharge.' The latter, indeed, is much more likely to happen from a protracted confinement to bed, and the debilitating influence of a lying-in chamber, and a lying-in regimen.

Among the disorders incidental to the parturient state, there is none more formidable than puerperal fever; and our opinion on its nature is opposite to that of Mr. Burns. We believe it to be always accompanied by, and dependent on, an inflammatory state of the peritoneum. We speak from some experience on the subject, as we have witnessed its progress in a lying-in hospital, and have examined the bodies of thirteen, who died within a very short space of time. In every instance, the peritoneum was inflamed, and covered, as well as the surface of the intestines, with a layer of coagulable lymph; and a quantity of whey-like fluid was effused in the abdominal cavity. That the disease is attended, from the very commencement, with great debility and a typhoid tendency, we readily admit; but in the case which terminated most favourably at the period alluded to, bleeding was used on the first day of the attack. Of medicines, emetics, especially ipecacuanha in very small doses, seemed to succeed best.

In the last book, on the diseases of children, we meet with little that has any claim to originality. It is principally compiled from Drs. Underwood, Willan, and Cheyne. A singular disease, which attacks the cheek, is described (at

p. 375) which commences with a swelling, at first hard, white, and shining; which proceeds rapidly to phagedænic ulceration, and frequently terminates in the destruction of great part of the lips, cheek, and gums. It is accompanied with emaciation and fever; and the child is rather restless, or lies moaning in a drowsy state. It is often fatal; though sometimes the parts cicatrize, and the patient recovers, after an exfoliation of part of the jaw.

Few physiological remarks are to be met with in this volume: a circumstance which is favourable to the reader; for we confess that we have no very exalted idea of Mr. Burns's talents this way; since he can attribute the erection of the clitoris to the action of its muscles.—In the directions for passing the catheter, we meet with rather a whimsical comparison of the papillary projection of the orifice of the meatus urinarius, with an *irregular dimple*. But these, with occasional inaccuracies of language, are circumstances of minor importance: and, upon the whole, we consider the present work as an useful accession to the medical student's library. The hints which are occasionally thrown out on the personal conduct of medical attendants, are judicious, and cannot fail to be useful to young men entering into practice.—The adduction of authorities, for the support of practical directions, is sometimes carried to a ludicrous degree; but if the author judged it necessary to tell us, that 'Roderic de Castro advises the woman to attempt to have a stool every day;' he certainly might have noticed the valuable advice of Dr. Osborn, on retarding the delivery of the child, in order to facilitate the expulsion of the placenta.

Having thus followed Mr. Burns through his work, we shall sum up our opinion in his own words; and shall consider ourselves as pronouncing no unfavourable decision in saying, that, *in general*, 'his precepts will be found agreeable to the experience and practice of the best teachers'; and that he has neither wasted the reader's time in idle theory, nor misled him by mere speculation.'

ART. X. *An Essay on the Effects of Carbonate, and other Preparations of Iron, upon Cancer; with an Enquiry into the Nature of that, and other Diseases to which it bears a relation.* By Richard Carmichael, Surgeon. Second Edition, considerably enlarged and improved. 8vo. Murray. Printed at Dublin.

MR. CARMICHAEL comes forward, in the present publication, with a confidence founded upon enlarged experience, to recommend more strenuously, than in his first edition, the use of iron in cancer.

'Many and various,' says he, 'are the cases [which] a short interval has brought within my care or observation, alike in their symptoms, however different their circumstances; and variable [has been] the event of success or disappointment. But if experience has taught me, that in particular instances the medicine may prove inefficacious, and *must*, where the ravages of the malady are great and extensive; yet I had almost universally the satisfaction of discovering its efficacy, wherever the cancerous mass was not very much enlarged: and even when this was the case, instances were not wanting of a perfect recovery; and seldom, indeed, did it happen that the disease was unalleviated by the medicine.'

The first, and infinitely the most valuable part of the volume, is occupied by a detail of cases, either from the author's own practice, or that of medical correspondents; in a very large proportion of which, the preparations of steel were of evident and decided advantage. The remaining part is chiefly filled by disquisitions on the nature and independent vitality of cancer; on diseases arising from an excess or deficiency of iron in the system; &c. and is remarkable for a want of connexion, and a strong propensity to generalize from very limited data.

The common effects of the iron, when used in cases of ulcerated cancer, are, a speedy mitigation of pain; an amendment in the appearance of the sore; and the correction of the fætor, and a diminution of the quantity of the discharge: —even in hopeless cases, it renders the progress of the

malady less horrible and distressing, than where it is treated in any other manner.

But Mr. Carmichael does not rely solely on its external use; nor restrict its exhibition to cases of ulcerated cancer. He considers the free internal use of the remedy as essential to the cure; and has adduced several instances of painful indurations of the breast, which were completely removed by it. It may be objected, that these were not truly cancerous: yet they possessed all the characters usually attributed to the disease, except, that they admitted of cure.—But, whether, with Mr. Carmichael, we pronounce them occult cancers; or, in conformity to more prevailing opinions, call them indurations merely; yet, the knowledge of a remedy capable of removing them, must be considered as an important acquisition.

The cases in which the iron appears to have been most frequently successful, are ulcerations of the face, particularly of the alæ nasi. We do not, however, think, that all the cases of this description which Mr. C. has adduced, are to be regarded as cancerous. In case 3, for instance, the disease was cured by two applications of the carbonate; and the ulceration completely healed in 6 days: so thorough an alteration could scarcely have taken place in a cancerous sore in this short space of time.

The cases in which the chalybeate medicines fail to relieve, are those which occur in 'leucophlegmatic subjects, with a pale, sallow, melancholy countenance, whose constitutions strongly indicate an inclination to this disease.' In some fatal cases occurring under these circumstances, and related in the treatise, the attack was sudden, the increase rapid, and the bulk of the tumour astonishingly augmented.

'The patient's countenance, in such instances, is always of a deadly paleness, rather inclining to a livid hue; and medicine has but little effect either in retarding the progress of the malady, or in ameliorating the unhappy condition of the sufferer.'

The following are the directions given by Mr. Carmichael for the exhibition of his remedy.

'The preparations I have given internally, are the tartrate of iron and potash, and the carbonate, phosphate, oxy-phosphate, and sub-oxy-phosphate of iron. Some stomachs can only bear the preparations in small quantities: they affect most constitutions with constipation of the bowels, and many with head-ache and dyspnæa. I have, in very few instances, given less than 30 grains, in divided doses, during the day, or have exceeded 60. The latter quantity I have persevered in giving to many patients for a great length of time; but, when I attempted to increase it farther, I generally found that the stomach became disordered. Almost in every instance an increase of appetite, alleviation of pain, and amendment in the discharge, followed very soon after their internal exhibition; but in many cases no farther benefit was derived from them.'

Mr. C. prefers the sub-oxy-phosphate for internal use, in small and divided doses; and suggests the propriety of administering it blended with the white of an egg, and a small quantity of pure fixed alkali, with a view of facilitating its solution in the stomach. The combination of a grain of aloes with each dose of the steel, has been found effectual in obviating costiveness. In occult cancers, a solution of sulphate or of acetite of steel, (ʒi to lbi) is recommended as a local application; the other preparations being at the same time given internally.

For external use, the preparations which have been employed, are the carbonate, phosphate, oxy-phosphate, and arseniate of iron. They are to be made into the consistence of a paste, by the addition of water; to be spread over the surface of the ulcer; and renewed twice in 24 hours. Greasy applications are stated to be universally injurious to cancerous sores; and should not be used in conjunction with the iron. No pain or inflammation is produced by any of the preparations, except the sub-oxy-phosphate, which occasions an immediate and severe smarting: this, however, subsides, usually, in less than an hour. It is a singular circumstance, that the carbonate of iron, which is completely unirritating to a cancerous sore, should bring on violent pain and inflammation in simple ulcers, and in venereal chancres: a fact which the author has repeatedly witnessed. Mr. C. has

only of late begun to use the arseniate of iron: but it seems capable of affording extensive benefit.

Mr. Carmichael, it seems, was led to the exhibition of iron in cancer, by reflecting on its efficacy in the destruction of intestinal worms, and parasitic animals: he is persuaded of the independent vitality of carcinomatous tumours; of their bearing a close relation to tænia; and a remote analogy to other intestinal worms;—that the steel acts upon them as a specific poison; and, consequently, that its efficacy is not diminished by its passing through the course of the circulation.

Such is the outline of Mr. Carmichael's work. For his peculiar hypothesis, we find no reasons, which, to us, appear in the smallest degree probable: but, although we are not disposed to attribute the good effects of the carbonate of iron, in cancerous disorders, to its being a 'remedy against parasitic animals;' nor to concede any extraordinary virtues to the sub-oxy-phosphate, 'on account of its being a component part of the blood'—yet, the weight of evidence adduced in the volume, is sufficient to establish the superior efficacy of these medicines, in cases which make a more rapid and melancholy progress under the ordinary modes of treatment. In two cases of cancer of the uterus, the relief afforded was very conspicuous.

We are not solicitous to examine into the author's claim to originality: the merit of bringing forward the plan to general notice; of stating fairly the result of his experiments; and of extending and varying the modes of exhibiting the remedy; is unquestionably his own, and entitles him to the thanks of the community.—We must, however, caution the young practitioner against the over-sanguine expectations which the perusal of this treatise may excite. In common with most proposers of a new remedy, it is not improbable that Mr. Carmichael may sometimes have expressed himself with too great confidence: and in the hands of ordinary surgeons, the medicine may not be found to produce effects so extensively beneficial.—But, interested as we all are in the event of any plan which promises to remove one of the op-

probria of our art, we do not hesitate to advise every surgeon to peruse this book, and to make a trial of the treatment which it recommends.

We cannot avoid mentioning one omission, which appears to us of some importance; we mean the mode of preparing the phosphate, sub-oxy-phosphate, &c. These do not form part of the usual furniture of an apothecary's shop; nor are they in the Pharmacopœia of the College: and the reference to Mr. Accum is not sufficient.

We have not noticed the speculations on 'diseases arising from the want, or the excess, of iron in the system;' and Mr. C. must excuse us for expressing a conviction, that these are *parasitical appendages* to his work; and possess but a feeble portion of vitality. Should the work run to another edition, we urge the author to a free and extensive application of a chalybeate remedy to this morbid excrescence.

ART. XI. *A Practical Treatise on the Prevention and Cure of the Venereal Disease, particularly its Consequences, as Strictures, Affections of the Prostate Gland, Tabes Dorsalis, including Onanism, &c. in which a mild and successful Mode of Treatment is pointed out.* Third Edition, enlarged. By T. M. Caton, Surgeon, late of the United Hospitals of St. Thomas's and Guy's, Principal Proprietor and Editor of the Two First Volumes of the London Medical and Surgical Spectator, &c. 8vo. pp. 122. Highley.

THE author of this book appears greatly incensed against us; but we are not conscious of having given him any just cause of offence. When any one is in a passion, it is best, perhaps, to allow his anger to pass unnoticed. We will venture, however, to give Mr. Caton a short piece of advice: let him look upon the produce of his pen; let him examine his own performance with the candour and liberality he recommends to others; and he will find reflected from it sufficient to disgust him with the pitiful figure which he cuts in his fretful humours.

Every attempt to 'facilitate the cause of humanity,' when we find it supported with ingenuity or ability, will meet with our utmost support, and draw from us the most unqualified praise; but when a work comes under our view, containing so little professional information, and so much matter of a mischievous tendency, addressed to the public at large, as is to be found in the present volume, we must attend to the imperious dictates of duty, and pronounce an unqualified sentence of condemnation. Though to many it might appear sufficient to have merely stated our opinion of Mr. Caton's book in general terms; yet a wish to avoid the slightest appearance of personal animosity, induces us to point out those parts which we deem more particularly exceptionable.

But, before entering upon this exposition, we must declare our disapprobation of the principle and of the motives which appear to have influenced the author in his publication. The variety of form, under which venereal diseases shew themselves, sufficiently indicates their importance, and explains the difficulty which must frequently arise in their treatment from the earliest stages. If these forms are so various, and so difficult to those who have made them the study of a life, can Mr. Caton believe, for a moment, that, in the compass of 122 pages, he can instruct the public in such a manner, as to enable them (excepting under those few circumstances which he has thought proper to mention) to obviate, without farther assistance, the innumerable mischiefs which even his own work describes as attendant on improper management of the diseases in question? Yet we are told, that it is only where 'the condition of the parts *are* too seriously affected to be left to the guidance of the patient,' that there is occasion for professional aid! The author, by his treatise, may have disposed of many more of his bougies possessing a '*medicative power capable* of acting on *urethral* membranes and *mucal* glands,' than he otherwise would have done, (as, indeed, appears from the curious letters 'to Dr. Caton,' which he has published): but we very much doubt, whether it has in any other way facilitated

'the cause of humanity,' or been productive of any other effect, than that of rendering a few readers discontented with their medical attendants, and deterring them from a perseverance in the application of the remedies proposed for their complaints, from which alone they could expect benefit. The author has been very lavish of his prescriptions in other parts of his book; but if it be 'want of variation in the composition of the bougie that renders cases of stricture tedious and incomplete,' for what reason are the composition of these medicated bougies, and the circumstances indicating the propriety of their use, wholly unnoticed? Should there be any *secret*, however, in their composition, we are not so indelicate as to press a disclosure of so much importance; though, in the mean time, we must caution the public against such palpable quackery.

The author considers gonorrhœa as specifically distinct from lues venerea; a point which certainly remains open for discussion, but which we cannot think he has '*taken in a new light*.' In his description of the earlier symptoms, he states it to be

'A critical discharge from the urinary passage in the male, in consequence of the operation of a specific matter; and this generally happens with the last drops of [the] seed of coition, which are apt to be *retracted*, and carried back into the passage, as the parts collapse: its first symptoms are a little redness, and swelling at the orifice, which soon shows a watery discharge flowing from it, and becomes a running of a whitish or yellowish matter in the course of a little time: the disease becomes then, as it were, established.' p. 9.

When speaking of the cure of this complaint, he declines entering upon 'the various methods which have been attempted for curing this disease; a patient requires to know but one method, and it is the object of the author here to point out, from his own experience, what he has found most successful.' p. 11. All this is very well: the result of experience we shall always respect; but we do not see, that what the patients *require* to know, has any thing to do with the question.—If various methods of treatment have been successfully employed in any disease, we certainly should

expect, in a treatise upon that disease, to be favoured with a comparative view of these different methods, particularly if there should be reason for believing, (as will probably be admitted by all to be the case with gonorrhœa,) that, in different constitutions, very different, and even sometimes opposite, methods of treatment frequently become necessary. Upon the whole, we have no great objection to our author's treatment of simple gonorrhœa; and, with respect to chancre, bubo, &c. he innocently adheres to what most others who have gone before him have long since established. We must confess, however, that we find some difficulty in understanding, that a 'wasting of the testicles does not appear to *lessen* at all the venereal powers of a person'—particularly if 'nothing is left but the membrane of the part.'

The remainder of the work is taken up with the consideration of gleet, seminal weakness, obstructions, &c. which are treated of in a style sufficiently well calculated to bring patients to the author. We do not, however, think that the profession would thank us for discussing the absurdities that are brought forward under these various heads; and to others it may be enough, to give it as our opinion, that the greater part of the book borders so closely on quackery, as to render it unworthy of serious criticism.

As we have hinted, that our author not unfrequently indulges himself, by writing what we humbly conceive absolute nonsense, we shall, before taking our leave, present two short passages, which we have selected from among many others.

'It is by a complete enquiry into the phenomena of the disease we are to gain our knowledge of the part diseased; and as we advance to the *elementary fibre* affected, we, with tolerable precision, bring our *line of action* to bear on the *deranged point*.' p. 45.

'I lay it down as an invariable rule, that in the actual presence of inflammation, attended with ulceration, phymosis ought to be considered as an *adventitious disease* completely *independent* of the original virus, which only here can be considered as predisposing the penis to an *action of remote causes*.' p. 20.

ART. XII. *A Treatise on the Venereal Disease,* by John Hunter; *with an Introduction and Commentary,* by Joseph Adams, M. D. Author of Observations on Morbid Poisons, &c. 8vo. pp. 600. With six Plates. Sherwood, Neely, and Jones.

THE name of commentary recalled to our minds, with painful recollection and alarming anticipations, the voluminous labours of Van Swieten, and the still more heavy tomes, in which the sacred writings have been elucidated. Our apprehensions were dispelled, when we found that Dr. Adams had compressed his comment and its subject into a single octavo; and we can assure our readers, that, if they should not be instructed, they will not be fatigued by perusing the original part of this volume. The contributions of the editor, consisting of detached portions of various lengths, may amount to about forty pages. The 'Introduction' mentioned in the title page does not exist in the work: Mr. Hunter's introduction begins at the first page, and the Doctor's remarks, with the word 'Commentary' prefixed, commence in the same page.

The 'Commentator's preface' discloses the motives of the publication, not with the greatest felicity of method or language. Mr. Hunter is said to have been the first who fixed the true character of the venereal disease, reduced its facts to laws, and shewed the cause of every apparent irregularity. Hence his practice became popular, in proportion as his theory was understood. But his new doctrines required a new language. This consisted in substituting precise terms in the place of figurative expressions; and it was always as perspicuous as his conceptions were clear.

With all this precision and perspicuity it was neither popular nor understood; so that Mr. H. at last 'was prevailed on to believe there must be some incapacity about him in the use of common language.' Under this unfortunate impression, he submitted the treatise on the venereal disease to the inspection of three gentlemen 'accustomed to the best company.' According to Dr. A. these well-bred

revisers were not acquainted with the erroneous opinions and practices, nor even with the technical language which had prevailed before their time; and their labours were consequently fruitless. This account of a popular work, that could not be understood; and of perspicuous language, which three polite critics could not render intelligible; is said to be an apology for the present edition: we are further informed, that 'the work will infinitely more than repay the labour of studying it with all the application it requires.'

To illustrate and extend the arguments of an author by means of collateral information; to estimate impartially his merits and defects; to explain what is obscure; to expose real, and to reconcile apparent contradictions, form, in our conception, the objects which a commentator should endeavour to accomplish. He should be qualified for his undertaking, by strict impartiality, and a thorough knowledge of the subject. Dr. Adams is most notoriously biassed in favour of Mr. Hunter's opinions; and regards, with almost superstitious reverence, every thing that has fallen from the lips of his idol. His commentaries are executed in the spirit, which this avowed predilection would lead us to expect.

The obscurity, the confusion, and contradictions, which are sufficiently explained by Mr. Hunter's deficient education, and inexpertness in literary labours, but which no unprejudiced reader can fail to observe, mingled, indeed, with much valuable observation and sound reasoning, are not merely not exposed, but are even defended and praised.

Our commentator talks so loudly, on all occasions, about propriety and accuracy of language, that we expected him to be invulnerable on this point; but we do not find, on examination, that he at all exceeds the ordinary standard in this respect. We have already exhibited two or three specimens of very indifferent phraseology; and the following are no better: 'to relieve a person of difficulties;' 'doses beyond comparison greater;' 'incapacity to retain;' 'this figurative expression, if not the cause of, probably tended to perpetuate an erroneous practice,' &c. But we do not object merely to single expressions; the matter and manner of the remarks

in general are much below the pretensions with which the commentator sets out, and would furnish specimens of any thing rather than correct language or close reasoning. His notions about the 'laws of disease' are singularly perplexed: this phrase is pressed into the service in almost every line, and is repeated on such a variety of occasions, that we are at last entirely unable to decide what it means. Mr. Hunter has reduced his opinions concerning the lues venerea into nine propositions; which, according to Dr. A., make up a *law*.

'Like all the other laws of nature, when discovered, this was found simple, and in perfect analogy with others, as far as the phænomena agreed: but so long had the world been amused with figurative expressions, so much was their indolence captivated with the phantom of a disease, which assumed all shapes, was governed by no laws, and which, when once introduced into the blood, could never be eradicated; that to this day there are many who refuse their assent to Mr. Hunter's doctrine; still more, who fancy themselves incapable of understanding it; and most of all, who refuse to collect their attention long enough to go through the whole detail.' p. 463.

If the reader can understand what is our commentator's object in the preceding passage, he may probably be able to unriddle the following sentence.

'There is not a passage in any medical writer that marks more strongly, than this chapter, the proper connection between physics and metaphysics; that is to say, that after establishing certain natural laws, or tracing a certain train of events, which, in the progress of nature, follow each other, instructs us so well how far we may venture to suggest the causes which may interfere with that train, so as to prevent the ultimate effect.' p. 304.

All this appears to us much less intelligible than the original.

We give one more extract from this enemy to figurative language. After a strange comparison of Mr. Hunter to Sir Isaac Newton, the Doctor proceeds:

'But in *reducing disease to certain laws*, we must *catch the transient picture* as it passes. In explaining ourselves, we must refer not to

the common, but the altered appearance of nature, and to *alterations varying in shades* not only according to seasons and unknown combinations of the atmosphere, but according to the variety of constitutions in different subjects, and even in different conditions of the same. It is not easy to rob a Newton of his discoveries. To be known, they must not only be published, but the series of arguments leading to them must appear, before they can be received. They cannot *float on the surface* in such a manner that parts may be collected, and become the property of others, or become common property, before any one is aware to whom he is indebted for them.' p. 1 and 2.

Verily, this is not a man to accuse others of verbiage.

That the contradictions and obscurities of Mr. Hunter's treatise are not reconciled or explained, might be proved in abundant instances. At p. 35 Mr. H. asserts, that the contact of the poison will produce gonorrhœa in any secreting surface; while, from the facts mentioned in another part of the work, it appears very clearly, that an application of the matter to the mouth, fauces, and stomach, produced no effect. p. 425. The Hunterian paradox about the identity of the matters of gonorrhœa and chancre, and the possibility of lues venerea occurring from the former, is still upheld by Dr. A., although so notoriously contradicted by the result of general experience. The latter argument is evaded by the quibble, that those gonorrhœas, which are not followed by lues, are not venereal. But this is no answer to the assertion, that the constitutional affection never follows gonorrhœa. Mr. Hunter's doctrine concerning the constitutional symptoms is accompanied by the longest effort of the commentator, who has also laboured the same point at considerable length, in his own work on morbid poisons. A judicious friend would not, we think, insist so much about this jargon of susceptibility, disposition, and action. It always appeared to us that science has gained nothing by the introduction of these terms. That a person, in whom a morbid poison applied to the body produced its ordinary effect, was, at the time of application, in a state of body *susceptible* of that effect; and that another, in whom a similar application was unattended with any effect, was *insusceptible*, appears more

like a truism, than a profound discovery. But, in the next place, as the disease does not immediately shew itself on the application of the poison, and as secondary symptoms of syphilis appear at uncertain and distant periods from the primary ones, it is said, that in this interval the constitution is disposing itself for the future action. We read of the 'constitution recommencing the process of disposing itself for the disease;' and we are told, that 'this state of the constitution is the disposition for the future disease.' Here we know nothing more than the obvious fact, that there is an interval between the application of the cause and the production of the effect. That any peculiar state of the constitution or part, different from the healthy condition, and deserving, from such difference, to be designated by the term disposition, takes place during this time, we have not the slightest proof. Mr. H. asserted also, that *the disposition* cannot be affected by any medical treatment, and that the effect of mercury is simply to cure the actual disease, without preventing any future affection. This is undoubtedly a most important doctrine, and its complete demonstration would have been most eminently beneficial to mankind: but it is, unfortunately, at variance with common experience, and is inconsistent with many passages of Mr. Hunter's own writings. He constantly employs the phrases of 'securing the constitution,' 'preventing contamination,' 'destroying the poison', &c. all which refer to something more than removing present symptoms. And in the famous experiment, (part vii. ch. ii. sect. 2,) the history of which cannot but appear very suspicious to any unprejudiced reader, he obviously distinguishes the employment of mercury enough to cure present disease, from its use with the view of preventing subsequent appearances. Surgeons, too, are in general aware of this practical fact, that if mercury were left off as soon as the disease had disappeared, its reappearance in other parts is much more probable, than where the effect of the remedy is kept up longer; and they act universally on this opinion. We cannot help thinking, that the commentator has been guilty of great neglect in not

exhibiting a fair statement of this question, and attempting to lay down some precise rules, which might obviate the effects of the indecision and contrary statements, which the student will meet with in the work of his 'guide, philosopher, and friend.' Such an addition would not only have been more useful, but much more appropriate to a treatise on the venereal disease, than remarks on inflammation, suppuration, and fevers, on Newton and Sydenham, or even than disquisitions on small-pox, cow-pox, and hydrophobia.

The remarks on inflammation, at p. 19, are a good specimen of the wordy nothings, which we doubt not are considered by the author as examples of fine writing and close argument.

Inflammation 'is a new mode of action governed by certain laws. To support this increased action, and to change the mode of action according to the new circumstances of the part, all the vessels connected with the part must possess a power equal to the new offices required, and the constitution must possess strength to maintain the parts in the use of such power.'

We are then favoured with the examples of two effects, which Dr. A. appears to consider as very similar to, if not actually the same as, mortification.

'Every animal has a certain power of muscular action, and every man has certain reasoning powers. Action seems, if not necessary, at least useful, for both; but either of them may, for a time, support an action which, if continued beyond a certain degree, will destroy either life, or the organ whose action has been too long increased. A horse will feel that high animation, which will enable him to go over a quantity of ground greater than he could accomplish at other times; but if this extraordinary action is kept up too long, the consequence is the death of the animal. In the rational part of man, if action is kept up longer than the reasoning powers can support, the consequence is sometimes fatuity altogether.' p. 19 and 20.

Why could not the Dr. speak out fairly here, and tell us his real opinion, that fatuity is mortification of the mind?

Commentators have always been famous for discovering hidden meanings. Thus Dr. A. finds in Mr. Hunter an opinion, of which we cannot discover the slightest trace;

viz. 'that the venereal poison owed its origin to some unnatural connexion.' p. 23. This naturally leads our commentator to the subject of cow-pox, from which there is an easy transition to small-pox. Then follows the account of a curious 'coincidence of language between Dr. Jenner and myself, without any previous knowledge of each other's writing.' p. 24. The thing would have been much more curious, if Dr. A. had possessed previous knowledge of a work not published until three years after. A most ludicrous caution is then subjoined, warning the reader not to ascribe any part of Dr. Jenner's discovery to him, Dr. Adams!

Our readers must be well aware, that Mr. Hunter is very fond of discovering the intentions of nature, and the end or object of the various processes in the animal economy. These he lays down in a tone as decided and undoubting, as if he himself had been the maker of our bodies, and the regulator of all their movements. His commentator will, of course, not be behind him; and he accordingly seems as familiar with the motives of nature, as if he had been of her privy council. 'Every poison,' Mr. Hunter has remarked, 'has a specific distance; that is, besides the immediate breach of the solids, it is found to produce a certain influence to a circumscribed space.' Pray, reader, observe the clearness of this illustration. 'The object of nature seems, in this case, to protect the rest of the body from the influence of the disease.' p. 52. Truly nature must be a sad bungler; and her protection is not worth having: for the disease in question spreads uninterruptedly, and attacks part after part until the whole body is diseased. The commentator proceeds to illustrate this matter of the specific distance;—not in the venereal disease, but in—cow-pox and small-pox. p. 53.

As much declamation, and many moral and pious reflections, have been caused by the introduction of the venereal disease into the southern islands, we shall extract a passage, which renders it very doubtful whether the disease actually exists there. And we make this quotation the more willingly, because it contains nothing about 'laws,' which unfortunate

word is so hacknied by the Dr. that we are quite sick of it. A lady of fashion, who was under the doctor's care in Madeira, lent him the account of La Peyrouse's voyage.

'After examining the surgeon's letters with the greatest attention' I could not help remarking, that he wrote of *mals* [*maladies*] *venerienes* without the precision of a Hunter. In the end, I was convinced there was reason to doubt whether de La Peyrouse's surgeon had met with the venereal disease in any of the places in which he spoke of it with so much freedom. This induced me to examine the accounts of Captain Cook's Voyages; and the result was, a thorough conviction, that, if the venereal disease existed at all in the South Sea islands, there was at least no satisfactory proof of it. Under this impression, I wrote to three physicians in London, explaining my doubts, and, perhaps with more quixotism than prudence, was willing, if encouraged, to make a voyage, in order to ascertain a point, involving not only an important medical question, but, in some measure, the national reputation. Fortunately, this question has been much better decided, by one who candidly admits his arrival at those islands with the most perfect conviction that the disease existed there in all its forms. His inquiry was not, therefore, whether he should find it, but how general, and with what severity it would appear, and also how he might preserve the health of his crew. From these circumstances, and still more from the character of the gentleman, no doubt can be entertained of the faithfulness of his conclusion, which is, *that the venereal disease is unknown at Otaheite.*'*

We think that Dr. Adams has failed completely, if he designed, by this publication, to remedy what is objectionable, and supply what is deficient, in Mr. Hunter's treatise. He does not even pretend to introduce the information which subsequent writers have laid before the public; although he might, in this way, have occupied to much greater advantage the room devoted to many of his own commentaries.

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* 'From the foregoing statement,' says Mr. Wilson, 'it may be concluded, without, I hope, presuming too much, that, notwithstanding the melancholy accounts we read of the ravages of lues venerea at Otaheite, and even disputations about its first importers, this disease was not introduced there antecedent to the Porpoise's Voyages.' See Edin. Med. Journal, Vol. II. p. 283. The Porpoise is his Majesty's ship, of which Mr. Wilson was surgeon, and arrived at Port Jackson in June 1801.

ART. XIII. *The First Lines of the Practice of Surgery: being an Elementary Work for Students, and a concise Book of Reference for Practitioners.* A new Edition, corrected and enlarged. By Samuel Cooper, Member of the Royal College of Surgeons; Fellow of the Medical Society of London; Author of a Treatise on the Diseases of Joints, &c. 8vo. pp. 619. With Copper Plates. Phillips.

MR. COOPER informs us, that he is induced to publish a second edition of his 'First Lines of the Practice of Surgery,' in consequence of 'the rapid and extensive sale' of the first edition. If the world think in the same manner of Mr. Cooper's book, as he himself does, we need not marvel much at this success. We hardly recollect to have met with an author who entertains a higher opinion of his own productions. He informs us, for instance, that 'conciseness, plain descriptions, invariable candour, and a disregard of vague hypotheses, prevailed in every page of the former edition,' and at the same time solemnly assures us, that 'his vanity is not kindled by its success, or by the praises, which he has received from persons, who are, to this moment, utter strangers to him.' Such declarations on the part of the author will save us the trouble of bestowing our mite of praise on his work. We certainly could not say much more in favour of any work of this kind; and as we might possibly not be disposed to say quite so much with regard to that before us, we deem it more prudent to preserve a total silence; for any commendations which we might bestow, would, indeed, be obscured by those less qualified praises, of which the author himself has been so profuse.

There are some additions of minor importance to the present edition; but the only material ones, are a chapter on the '*ruptured* Tendo Achillis;' and an Appendix, which contains 'an account of a new instrument, invented by Mr. Henry Earle, for breaking stones, which are too large to admit being taken out of the bladder, after as ample an opening has been made as can be done with safety.' Of the

former of these we need only say, that the account of the accident and its treatment is very plain and intelligible; and of the second, that the instrument, which Mr. Earle has proposed, is ingenious, and apparently better adapted for the purpose, than any other with which we are acquainted: and we would willingly transcribe the account of it, and of the mode of using it, if it could be understood without the plate.

CHAPTER III.

ANATOMY, PHYSIOLOGY, MATERIA MEDICA, CHEMISTRY, PHARMACY, BOTANY, AND VETERINARY MEDICINE.

ART. I. *Recherches sur le Système Nerveux en général, et sur celui du Cerveau en particulier ; Mémoire présenté à l'Institut de France, le* 14 *Mars,* 1808; *suivi d'Observations sur le Rapport qui en a été fait à cette Compagnie par ses Commissaires.* Par F. J. Gall, et G. Spurzheim. Avec une planche, 4to. pp. 277. Paris, 1809.

THE brain has been regarded, in all ages, as the material instrument of the sentient and thinking principle; and the nerves are undoubtedly the medium through which the mind and external objects reciprocally influence each other. The anatomist and physiologist have always bestowed on the nervous system a degree of attention proportioned to the importance of the functions which it executes. The brain, in particular, has been their favourite study. By dissecting this part, they have hoped to solve the interesting problem of the connexion between our organization, and the imaginary immaterial principle supposed to regulate its motions; and to develop the mysteries of sensation and of the various mental operations. Hitherto these expectations have not been realized. The extremely complicated structure of the encephalon has been represented with unrivalled beauty and accuracy, and described most clearly and elegantly by Vicq d'Azyr. But his work, which is a splendid monument of the

arts, and shews what can be effected by well-directed patronage in the advancement of science,* consists entirely of anatomical details. The size, figure, connexions, and structure of all parts in the brain, are unfolded with the greatest fidelity; but their uses receive no illustration. The labours of Soemmerring, the most accomplished of modern anatomists, who, like Vicq d'Azyr, has chiefly employed himself in investigating the contents of the cranium, have not been more successful in determining the uses of the different parts of the brain. Undismayed by the repeated failures of their predecessors, Messrs. Gall and Spurzheim have applied with increased ardour to this interesting subject. They claim the merit of many new discoveries in the anatomy of the brain; they have founded certain physiological opinions on these; and have even attempted to shew a connexion between certain points of structure and the moral and intellectual dispositions of individuals. The first of these gentlemen has attracted much notice, of late years, by the opinions delivered in his lectures in the principal cities of Europe. His pupils have published various statements of his doctrines, which have met with equally zealous opponents and advocates. The imperfect manner in which the anatomical discoveries of Gall are represented in these productions, will account for the neglect which they have experienced in this country; and the absurdities ascribed to him, under the title of craniological observations, justify the contempt, which many associate with his name. In this, which is the first statement of his opinions, bearing the stamp of his own authority, he appears before the public in a much more respectable light. He has submitted his alleged discoveries concerning the anatomy of the brain, to the first scientific tribunal in Europe; and, as they involve much intricate anatomical detail, the account was very properly referred, for examination, by this learned body, to five of their own members, the most distinguished for their proficiency in anatomical science.

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* This book, which is dedicated to Louis XVI., could not have been published without the pecuniary assistance of the French government.

Gall and Spurzheim dissected the brain in the presence of the commissioners of the National Institute, M. M. Tenon, Portal, Sabatier, Pinel, and Cuvier, and gave the most ample explanations of their peculiar opinions. The dissections were repeated by these gentlemen, and the result of their investigations is contained in a report,* which appears to have been adopted by the Institute. The 'Recherches' present us with the original memoir, and observations by its authors on the report of the commissioners. If Gall's lectures have not contained matter very different from the present specimen, we can by no means account for their popularity. Nearly the whole of this work is occupied with the driest anatomical descriptions; and lectures of the same kind, in this metropolis, instead of exciting public attention and interest, would hardly have drawn together half a dozen auditors. Since, however, the French commissioners allow the claim of our authors to several discoveries, and the subject has attracted so much attention on the continent, we hope that it will not be entirely overlooked here;—we trust that the London anatomical teachers have not allowed the winter to elapse, without demonstrating to their pupils the new observations, and thus proving, that they do not belong to the class stigmatized by Gall and Spurzheim, as 'anatomistes routiniers.'

The reader must not expect to find in this work a development of all Gall's opinions. This anatomist has examined the brain and nervous system in great numbers of animals, and occasionally introduces illustrations from comparative anatomy. But he proposes to deliver the result of all his researches, both into the structure and functions of these organs, in a large work, with very numerous plates, of which

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* An English translation of this was published in the Edinburgh Medical and Surgical Journal, January, 1809, under the following title: 'Report on a Memoir of Drs. Gall and Spurzheim, relative to the anatomy of the brain, by M. M. Tenon, Portal, Sabatier, Pinel, and Cuvier, presented to, and adopted by, the class of mathematical and physical sciences of the National Institute.'

the first number was published during the last summer, although it has not yet been received in this country. We propose to deliver an abstract of the matter contained in the memoir and report; but our limits will not admit of much observation, as the details are numerous. We must previously caution our readers against forming too hasty an opinion on the matters discussed in these ' recherches.' The French anatomists, after having the facts demonstrated and explained by the discoverers, and repeatedly examining the parts themselves, are still alleged not to have entered completely into the scope of the new observations, and to have misunderstood many points. How much more likely are we to commit mistakes, when our notions must be formed entirely on the very inadequate foundation of mere description. Against the misconceptions arising from this source, our authors enter a very reasonable protest, which we transcribe, because we have heard their doctrines criticised, and even derided, by persons who had never taken the trouble of examining them by the only fair criterion, of repeated dissections. Teachers are accustomed to see their opinions received implicitly, and, from meeting with no contradiction, often infer that their dogmas are indisputable. This notion conspires with the natural love of indolence, to make them regard all deviation from accustomed proceedings, as therefore wrong; and the powerful effect of such habits, in opposing the progress of truth, is most strikingly illustrated by the well-known fact, that no lecturer more than forty years of age adopted the discovery of Harvey. The French anatomists have acted very differently in the present instance; and we hope that our teachers will follow so good an example.

' It is almost impossible,' say the authors, ' for a person to comprehend clearly our anatomy of the brain, without having many times witnessed our demonstrations, repeated them after us, and familiarized himself with the principles which guide our proceedings. In reading our descriptions, anatomists imperceptibly substitute their own ideas and opinions in place of ours. Even if they succeed in acquiring clear notions of some isolated points, the collection of facts escapes them, and the want of union disturbs the harmony of the whole. The

thorough conviction, that our anatomy and physiology could be understood only by personal demonstration, determined us to adopt the plan of giving public courses.' Introduction, p. xi. xii.

The memoir begins with setting forth the peculiar mode of demonstration, adopted by the authors, in exhibiting the structure of the brain. Instead of forming successive horizontal sections from above downwards, they begin below, and trace the medullary fibres from the medulla spinalis into the brain. It will be readily allowed, that the ordinary method, which is very convenient for exhibiting the cavities, is altogether unfit for the purpose of developing the progress of the fibres, and for shewing the connexions of the different parts of the organ. Some of the objections to this proceeding, and the answers of Gall and Spurzheim, are not very profound. The medulla spinalis, in the common phrase, arises from the brain, and ought to be examined after it—but, reply the authors, the brain arises from the medulla spinalis, and ought to be dissected the last in order. The expression, that one part arises from another, has always been considered by us as denoting merely the fact of connexion between the two; we should never imply by it any dependence, or succession of formation, which are contrary to all observation. Gall and Spurzheim only quarrel with the common opinion, which derives the medulla spinalis from the brain, because they think that the natural order is inverted in that supposition. The clearest refutation of the general notion, if indeed persons do in general suppose the spinal marrow and nerves to be literally *prolongations of the brain*, may be drawn from the case of acephalous fœtuses, in which the encephalon is wanting, while all the other parts of the nervous system are complete. It has been objected, that the acephali are formed originally with brains, but that the organ is destroyed in the uterus, by hydrocephalus. This monstrous absurdity is refuted at full length in the 'Recherches.' The authors, by deriving the brain from the medulla spinalis, commit a blunder just like the common one, and merely invert the order of derivation.

The common method, of making sections of the cerebral

substance, is particularly objected to by our authors. They employ very much the handle of the scalpel in tracing the course of the medullary fibres, and often use their fingers. They also adopt the practice of scraping (racler) the surface, in order to disclose many circumstances.

The particular opinions of Gall and Spurzheim are drawn up in ten articles, acknowledged by themselves to contain a true expression of their doctrine, and which we therefore extract as the most certain way to avoid misrepresentation.

'1. The cineritious matter is the matrix of the medullary filaments; wherever it exists, these filaments are produced; it exists wherever they are produced. Whenever a medullary bundle crosses cineritious matter, it is enlarged by filaments received from the latter; and none of these bundles enlarge without the concurrence of this matter, whether it form a sensible enlargement, or only follow and accompany the medullary bundle.

'2. The spinal marrow is not a bundle of nerves descending from the brain. The spinal nerves arise by filaments, some of which ascend, others descend; this is observed especially in brute animals. The cineritious matter of the internal part of the spinal marrow is the matrix of these filaments; the spinal marrow swells wherever it gives off a pair of nerves; and the more, the larger that these nerves are. Thus the spinal marrow of the larger animals, as well as that of insects and worms with red blood, is only a series of ganglia, which give off nerves; but all those ganglia communicate with each other.

'3. The nerves commonly called cerebral, and which arise from the under part of the encephalon, and chiefly from the medulla oblongata, do not come from the brain any more than the others: on the contrary, when we follow separately the roots of each of them into the substance of the medulla oblongata, we see that they reascend from the medulla towards the point where they appear externally, and that they do not descend from the brain, to pass through the medulla oblongata.

'4. The brain and cerebellum are themselves only developments of bundles, which have come from the medulla oblongata in the same manner as the nerves proceed from it. The brain, in particular, arises principally from the bundles called pyramidal eminences, which cross each other in passing out of the medulla oblongata, each going to the opposite side to that from which it comes. They swell

out first in crossing the pons varolii, again in passing through the tubercles called thalami optici, and a third time in the corpora striata; always from the addition of medullary filaments, which the cineritious matter, contained in these three parts, adds to those they originally consisted of. The cerebellum comes from bundles called processus cerebelli ad medullam, or corpora restiformia, which receive an addition of filaments once only from the cineritious matter of what is called the corpus ciliare.

'5. Each of these two pairs of bundles, after receiving the additions just described, and having consequently assumed a diverging direction, terminates in two large expansions, covered externally by cineritious matter, which only here deserves the name of cortical substance; and these expansions, folded in various ways, form what are called the hemispheres of the brain, the lobes, and the vermiform processes of the cerebellum.

'6. From the whole extent of these expansions other medullary filaments are produced, which converge from the two sides of the brain and cerebellum towards the middle line, where the filaments of the one side unite with those of the other, and form what are called the commissures. The corpus callosum, the fornix and its appendages, form the largest of the commissures of the brain; the anterior commissure is that which joins the middle lobes. The commissure of the cerebellum is composed of the transverse layers of the pons varolii.

'7. When we remove or lacerate the converging fibres which go to the corpus callosum, and which serve as ceiling to the lateral ventricles, there only remains, under the cineritious substance, a medullary part, lining it, and following all its folds. Each convolution of the brain and cerebellum, instead of forming a solid mass, as anatomists have hitherto supposed, contains in its middle, a solution of continuity; and, by employing proper care, we may unfold this portion of the medulla, as we might unfold the cineritious substance, if it were alone. In a word, each convolution is a kind of small purse or canal, closed externally by a double layer of cineritious and medullary matter, and towards the ventricle by the converging medullary fibres.

'8. As the pairs of bundles forming the brain and cerebellum have their commissures, those which form the nerves have often theirs also, which may very easily be demonstrated in the second, the fourth, fifth, and seventh pairs, and very probably in the others.

'9. The ganglia spread over the whole body, are small masses of cineritious matter, which certain nerves pass through, and by which

they are strengthened, as the pedunculi of the brain are increased in the thalami optici and corpora striata. These two pairs of tubercles, then, are true ganglia to these pedunculi. The cineritious matter of the cortical part of the brain and cerebellum may likewise be regarded as a ganglion of the commissures, or converging fibres. That of the inner part of the spinal marrow forms, in like manner, the primary ganglia of the spinal nerves. The cerebral nerves have probably each of them a particular ganglion, and it is easy to demonstrate it in several of them. The cineritious matter, and consequently the ganglia, may therefore be compared to the mucous expansion, which covers all the extremities of the nerves of the skin, of the intestines, and even the pulp of the labyrinth, and the sort of mucous varnish, which covers the retina.

'10. From these nine articles, all merely anatomical, all more or less susceptible of being verified, a tenth results, which completes and is the essential character of the anatomical doctrine of Drs. Gall and Spurzheim; viz. that each pair of nerves forms a particular system; that all these systems communicate together, and reunite in the great chord of the medulla oblongata and spinal marrow; and, lastly, that the brain and cerebellum, far from being the origin or source of this chord, are, on the contrary, an appendix or sort of diverticulum, reserved for certain functions, but receiving an influence from all the parts of the chord, and exercising one upon them by means of their communications.' Edin. Med. and Surg. Journal, Vol. V. p. 43—45.

The first and ninth articles contain some important propositions, of which we cannot discover any sufficient proof. That the masses of cineritious matter, dispersed in the interior of the encephalon and spinal marrow, possess an identity of properties and functions with that which covers the surface of the cerebrum and cerebellum, is possible, nay, perhaps even probable; for the sensible characters of the substances are nearly the same. But we see no direct argument in proof of this point. We should hesitate still more in admitting the comparison between the parts just mentioned, and the nervous ganglia. Anatomy detects great differences in their texture; and we are equally ignorant of the properties and functions of both. If we cannot acquiesce in those propositions, what shall we say, when the cortical matter of the brain, and the substance of nervous ganglia, are pro-

nounced to be the same in structure and office with the retina and membrane of the labyrinth, with the rete mucosum of the skin, and the lining of the alimentary canal?

'Here,' the reporters justly observe, 'there can only be, with respect to structure, texture, in short, physical nature, a resemblance purely hypothetical. In the absence of proofs derived from direct examination, this comparison could only be justified by some resemblance in the functions and mode of existence during life; but where do these appear?'

The function assigned to the cortical matter, as far as we can understand the meaning of the phrases, in which it is conveyed, does not seem to differ essentially from the old opinion, which supposes the medulla to be secreted from the cortex. Besides calling the cortex the matrix of the medullary fibres, the latter are said to arise from, and to be increased or reinforced (renforcé) by, the cortical matter. If the origin of the medulla from the cortex mean any thing more than the fact of connexion, we object to it, on the ground already stated. The notion of one part being produced by the other, is not supported by one fact or argument, and is not more probable, in our opinion, than that the skin should secrete the cellular substance or subjacent muscles. Our observations on the brain, in the early stages of fetal existence, shew that the two substances are coeval, and that the cortex enjoys no priority of formation to the medulla. Why should the latter possess numerous vessels, but for the purposes of its own growth and nutrition? And by what possible stretch of supposition can it be even imagined, that the medullary matter of the nerves in general is secreted, or in any way produced, by the cortex? Gall does not indeed go the whole length of the received opinion, which states, that the medullary fibres are tubes conveying a fluid secreted by the cortex; —this forms a more complete triumph of authority over the most direct evidence of the senses than any other physiological hypothesis.

The observations on the spinal marrow afford a specimen of very illogical argument. The caterpillar has a nervous chord running along the body, with ganglia at stated inter-

vals: the latter, with the nerves arising from them, form separate nervous systems, communicating by means of the common chord. Therefore the points at which the spinal nerves come off in fishes, birds, and mammalia, are ganglia, constituting the centres of particular systems, which exert reciprocal influence through the connecting portions of the chord. Unluckily for this inference, the medulla spinalis of man and animals shews none of these swellings to common observers; and the reporters consequently cannot confirm the statement of Gall and Spurzheim on this subject. Where the obvious structure and the properties are so completely different, as in the caterpillar or worm, and the mammalia, what are we to think of the reasoning, which proceeds on the supposition of a perfect analogy? In their observations on the Report, the German anatomists still maintain, that the swellings of the medulla spinalis may be discovered by close inspection. They acknowledge, that the structure of the lower orders led them to look for these ganglia in the mammalia; and add, that they are most distinctly visible on the posterior or superior surface. This is not the only example in which we have observed the authors adopting remote analogies, and applying to the human subjects inferences deduced from animals of very different general organization. The ganglia, including the corpora striata, thalami optici, corpus ciliare of the cerebellum, &c. are compared to the rings which surround the basis of the branches of trees; and the whole organization of the nervous system is affirmed to be exactly analogous to that of a tree. The comparatively small importance of the brain is inferred from the experiments, in which tortoises and frogs have lived for some time, executing all their functions, after the organ had been destroyed. If we see a very slight injury of the part produce fatal consequence in man, if we see death following the effusion of a little blood on its surface, do not these facts prove the great importance of the encephalon in the human system, as clearly as the others shew its minor consequence in creatures of different organization?

In tracing the origins of the nerves from the medulla oblongata, there is no difficulty with regard to the spinal

nerves, nor the glosso-pharyngeal, nervus vagus, and hypoglossal nerve.

The auditory nerve has generally been traced from the medullary streaks on the surface of the fourth ventricle, and Haller, Vicq d'Azyr, and Soemmerring, still ascribe to it this origin. The fact has latterly been denied. On this subject, Gall adopts the observation of two German anatomists, the Wenzels, who have pointed out a small gray and slightly prominent band, placed transversely upon the corpus restiforme, covering a part of the base of the auditory nerve, and uniting it with the fourth ventricle. He has discovered, further, that this is larger in proportion to the size of the ears and the acuteness of hearing in different animals; and that in the horse, stag, and sheep, it equals the testes in bulk.

The facial nerve goes off at the angle formed between the pons varolii and the corpus restiforme. The abductor nerve is seen clearly in herbivorous animals, arising at some distance behind the pons varolii, and appearing as the continuation of a small bundle, which ascends between the corpus pyramidale and olivare. It is only on account of the greater breadth of the pons in man that this nerve approaches to its posterior edge.

Santorini had already observed, that the roots of the par trigeminum could be traced to above the corpora olivaria. This fact had been overlooked by Soemmerring, but has been verified by Gall. He follows the origin of the nerve as far as between the corpora olivaria and restiformia, and shews that the breadth and thickness of the pons in man were the obstacles to its being discovered sooner. As this part is much smaller in herbivorous animals, the roots of the nerve are easily traced, through the pons, to a longitudinal bundle running along the outer side of the corpora olivaria.

The nerve of the fourth pair has no connexion with the medullary mass of the brain. The roots, by which the motor oculi comes from the crura or pedunculi of the brain, are manifestly directed from behind forwards. They may be followed into the pons varolii, but a part of them is lost at the black substance of the pedunculi.

The observations of the authors on the optic nerves, give to them a very different origin from that which is commonly assigned. We extract the passage from their memoir, as a specimen of their manner.

'We do not yet venture to determine the first rudiments of the optic nerves. Lieutaud, Chaussier, and others, derive them merely from the optic thalami; although Santorini, and, among the moderns, Hildebrand, Soemmerring, and Boyer, state, that they arise in great measure from the nates. It is very evident in brutes, particularly in the horse, the calf, and sheep, that the front pair of the tubercula quadrigemina gives origin to a broad band of nervous fibres, which bends round the outside of the optic thalami, and appears to receive a small addition from the corpus geniculatum externum, where it ceases to adhere, except at the anterior edge. Hence, it proceeds towards the front, and becomes closely attached to the layer of pulpy or cortical matter, called by some tuber cinereum, receiving from it several new filaments. Now, it meets the nerve of the opposite side, and decussates that nerve, according to the opinion of the most enlightened anatomists; although this decussation is denied by others, who allege, in favour of their opinion, reasons which appear to us to be inferior in force to those of their opponents.'

They proceed to state, that after blindness lasting for many years, they have seen the nerve of the affected side diminished in size, (atrophié,) as far as the union, and that the change has continued from this point along the nerve of the opposite side; and that the nates of the same side has also been considerably diminished.

'No proportion is observed between the size of the optic nerves, and of the optic thalami. The latter are much smaller in the horse, the cow, and the stag, than in man, although the optic nerves of these animals are much larger; but the proportion is always preserved between these nerves and the nates. This truth is very clearly exhibited in the brain of birds. Anatomists have very strangely confounded these tubercles, in birds and fishes, with the optic thalami of the mammalia, although the hemispheres contain, in these instances, the same parts as in other animals.' Recherches, p. 101—104.

The essential points of this statement are admitted by the reporters; who observe only, that, as the separation of the

nerve from the thalamus is performed by the handle of the scalpel, it must partake of the doubt, to which all such operations performed on the brain are more or less liable. The fact, that the supposed thalami of birds are the nates, is confirmed by Cuvier, who had adopted the common opinion in his works.

The olfactory is the only pair which have not yet been traced to the medulla oblongata. The authors are disposed to refer the origin of this nerve to a fasciculus, arising at the side of the corpora pyramidalia, passing through the pons to the testis, continued thence to the corpus geniculatum internum, and then passing under the optic nerve, beyond which they cannot trace it. On this subject, the reporters observe, that the cetacea, which have no olfactory nerves, have testes: they have also corpora striata, which shews that the common opinion concerning the origin of these nerves is incorrect.

In the following statement, the authors contradict an opinion generally held concerning the relative magnitudes of the nates and testes in carnivorous and herbivorous animals.

'The testes are tolerably large in all the cat-kind; the nates are also of considerable size in these animals, because the optic nerves are rather large. In the dogs the front eminences are small, the optic nerves proportionally small, and the posterior tubercles larger. The pig, sheep, cow, and horse, have both pairs of considerable size. Hence we may conclude, that the different magnitudes of these tubercles hold no relation to the nature of the food on which the animal subsists.' p. 110.

The origin of the medullary fibres of the brain is assigned, in the fourth article, to the corpora pyramidalia.

'Just at the spot where the medulla oblongata begins to swell at its lower part, at one inch and a few lines below the tuberculum annulare, let the arachnoid and vascular coats be divided by a superficial incision, not extending into the subjacent parts, and then be carefully removed. The edges of the groove, which runs in the middle, are then to be gently separated. Thus we shall expose a small portion of platted work, formed by three, four, or five threads, crossing

each other, coming obliquely from below upwards, and occupying a space of about three or four lines in length. The nervous threads, arising in the cortical matter on each side, pass respectively to the opposite sides, so as to produce a decussation of the pyramids.' p. 129, 130.

This fact, according to Gall, was known to some of the ancients, and certainly to Fab. Hildanus, Domenico Mistichelli, F. Pourfour du Petit, Santorini, and some others. Yet it has been unaccountably overlooked or denied by modern anatomists.

These medullary chords, after their decussation, enlarge, and ascend towards the pons varolii, under the name of corpora pyramidalia. In this situation, accompanied by some other fasciculi from the upper end of the medulla oblongata, they enter the substance of the pons, covered below by a thick stratum of the crura cerebelli. Here they divide into several fasciculi, interwoven with transverse chords from the cerebellum, and penetrate a large mass of cortical substance, by which they are so enlarged and multiplied, as to form, at their exit, the crura or pedunculi of the brain. The latter, successively increased by means of the cortical matter, which themselves contain, enter the large masses of the same substance, called optic thalami, and are much increased by the accession of numerous filaments. They diverge from these bodies in a radiating manner. The posterior and middle portions form, by their expansion, the back and middle lobes of the brain; the anterior enter the corpora striata, and, after being augmented in these bodies, form the anterior lobes and the upper convolutions of the brain.

'All the fasciculi of the external margin (bord externe) of the corpora striata, and optic thalami, pursue every variety of direction; that is to say, towards the front and sides, the back and upper parts, and grow constantly broader to the sides of the great cavities. There they appear to form a tissue, from which they are afterwards disengaged in the form of numerous expanded filaments, to constitute duplicatures under the name of convolutions. The bases of these, and their interstices, restore the external surface of the tissue.'—'Beyond this tissue, each duplicature may be easily extended in the form of a bag; and

as this may be done in all, it follows, that, if the tissue be destroyed by a rude kind of manipulation, or extended by the gentle action of a constant force, as in hydrocephalus, all the duplicatures will be transformed into a kind of membranous expansion, covered externally by cortical substance. The cerebral membrane is, therefore, formed like the expansions of all the nerves, from the retina to the surface of the integuments; and the same laws are observed in the formation of the cerebrum and cerebellum, as in the other nervous systems; we have every where origin and successive increase through the intervention of the cortical matter, and final expansion covered by the same matter.' p. 137.

The unfolding of the convolutions is a point of the new opinions which has been very strongly contested, and on which, we should conceive, from the data now before us, that it is not easy to decide certainly. The reporters state, first, that they found the convolutions would separate into two lateral portions, as easily on one side of the middle line, as in the middle. But Mr. Spurzheim afterwards shewed them other experiments.

'Vertical slices of the circumvolutions, macerated in nitric acid, diluted with rectified alcohol, became hard, and were divided more easily at the middle line; the same phenomenon was exhibited when they were boiled for twelve or fifteen minutes in oil. Where one blows on such a slice, or directs a small stream of water on it with a spunge, the separation may be made very easily in the middle, but hardly at all at the sides. In the latter case, especially, the two surfaces, which are separated, remain smooth, there is no division of vessels, nor any traces of fibres passing from one side to the other.' p. 198.

The authors take up the subject again, in their remarks on the Report, and argue on it at considerable length. If their accounts of the experiments be correct, there can be no doubt of the fact, that the two sides of a convolution separate always in the middle line, when any force is applied. The following paragraph appears to exhibit most precisely the opinions of the authors.

'Let it be observed, on this subject, that, in advancing that the two layers of a convolution are in contact (adossées), we did not assert that they are simply in contact. Moreover, we admitted between them

an adhesion of contiguity, maintained perhaps by cellular substance; but not a connexion of continuity produced by confusion of substance. In our opinion, then, the union is of that kind which might be denominated *agglutination* (Anklebung), but not *concretion* (Verwachsung).' p. 200.

The authors of the 'Recherches' have mingled very little physiology with their anatomical disquisitions, reserving their observations on that subject to the publication of their large work on the brain. But they have given a few remarks, on the concluding paragraphs of the Report, in which their views of the cerebral functions are somewhat disclosed. According to them, the nervous system is made up of several particular systems, differing in structure and functions, and more or less connected with each other, so as to exert more or less reciprocal influence. We ought, therefore, to distinguish the common properties of all, from the specific functions of each. Besides discriminating the nervous apparatuses of the pectoral and abdominal viscera, medulla spinalis, &c., Gall conceives that the particular systems, contained in the brain, are as numerous as the distinct functions which it exercises. The origin of the nerves from different points, and from different collections of cortical matter, favours this opinion; and the particular systems of the brain consist of the various fasciculi and convolutions. If the brain be the assemblage of all the nerves, how can we attribute to it other functions, than those which belong to the nerves of sensation, motion, and nutrition?

Speaking of the general opinions concerning the common origin and identity of action of the nerves, they proceed:

'By substituting, on all occasions, the metaphysical ideas of the schools, in place of the data furnished by the observation of nature, physiologists, and even anatomists, have supported these fabrics of error, which have been regarded almost as sacred objects. The soul, say the schoolmen, is simple; its material residence must then be simple also, and all the nerves must end in one spot. Aristotle and several Peripatetics of the sixteenth century, having fixed the seat of the soul in the heart, derived all the nerves from that organ. 'These," says Cesalpinus, "can have but one origin, because each individual has

but one soul." Bonnet, Haller, and others, having extended its seat to the whole substance of the brain, were contradicted by the metaphysicians, who thought it too considerable; not reflecting, that a little more or less room would not enable them to explain the nature of the soul any better, nor that, according to the remark of Van Swieten, Tiedemann, and others, the simplicity of a material point, in which all sensations and ideas should centre, is inconceivable, in consequence of the confusion and disorder which would result from such a concourse. Nothing appears to us more ridiculous, than that the naturalist, to whom all nature lies open, should direct his researches and inductions by the guidance of such frivolous speculations. If the metaphysician would employ himself in the observation of facts, and in ascertaining the conditions on which they depend, his notions would no longer be at variance with the inferences drawn from anatomy, and one science would not arrogate the right of setting bounds to the progress of another. The doctrine of a single origin and centre for all the nerves is neither true nor possible. As this point can be verified by examination, it can no longer give rise to vague discussions. If, after this, the metaphysician cannot comprehend the unity of his individual consciousness (l'unité de son moi), we ask him, if he understands, in the organic life, how such different apparatuses concur, by their varied functions, in forming one whole? if he can reconcile, in the animal life, the circumstance of double organs with unity of functions, and simplicity of consciousness? if he knows what life is? or, in general, if he can comprehend any single power in the material world? These enigmas, which prove that our knowledge is limited, should not prevent us from using our senses and mental powers in investigating the accessible secrets of nature.' p. 231—233.

The concluding paragraphs of the 'Recherches' develop still further the peculiar views of the authors concerning the functions belonging to particular portions of the brain.

'Henceforward we may consider, in a much more exalted point of view, that most important part of the animal organization, the assemblage of the nervous systems. The laws respecting their origin, successive increase, and final expansion, are in part discovered and reduced to a general principle. The nerve presiding over sensation and motion, arises and is developed according to the same laws, which regulate the organ, by means of which the mind perceives, wills, and

reflects. The brain will become an interesting object, when it is no longer mechanically cut up, without any views, like a mass of inorganic matter. We shall now see in it dispositions for certain ends. All the old mechanical forms and connexions will now be transformed into a wonderful collection of material apparatuses for the faculties of the soul. As the actions of the various viscera, and the sensations of our sensitive organs, are regulated by particular nervous organizations; so each instinct, and each intellectual faculty, in man and animals, will be found subordinate to some part of the brain. If, then, the mind eludes our grasp, we may at least retrace it in its organs, which indicate the degree of intelligence possessed by each species and individual. They not only form the line of demarcation between man and the brute, but, by shewing the development of the faculties, teach us how nature qualifies different men for wisdom or folly, for command or obedience.

'The time is not far distant, when philosophers will agree with Bonnet, Condillac, Herder, Cabanis, Prochaska, &c. that all the phenomena of animated nature are founded on organization in general, and that all intellectual phenomena flow from the structure of the brain in particular. A few drops of blood effused in the ventricles, a few grains of opium, will prove sufficiently that volition and thought depend on the material conditions of the organs. Whoever wishes to understand completely the powers by which his machine is set in motion, to comprehend the nature of man and animals, and their relations to external objects, to establish a rational doctrine concerning the intellectual and moral functions, and the disorders of the mind, will find it indispensable to study the organization of the brain, together with its functions. In this way, the naturalist, the teacher, the moralist, and the legislator, may rectify their vague notions concerning human propensities and passions, and convince themselves, by sensible and evident proofs, that the human organization is adapted to a superior order of intellectual and moral qualities; consequently, that education, legislation, morality and religion, are essentially connected with the nature of man, and, instead of being merely useful, are inseparable from his happiness: because they furnish motives to counterbalance his evil propensities, and increase more and more the moral freedom of his agency.' p. 272—274.

The number of anatomical details embraced in this work, is so considerable; and the subject, in its nature, is so difficult;

that an opinion concerning the correctness of the representations could not be formed without much more numerous investigations than we have made. We have confined ourselves, therefore, generally to a simple statement of the facts, which, in their present form, do not appear to us to lead to any very extensive or important physiological deductions. We have not thought it necessary to enter into those discussions, which the physiological opinions quoted above would obviously lead to. The great work announced by the authors will afford a much better opportunity for forming a decisive opinion on all these points. The present specimen, together with the promises, which the authors hold out, of physiological and pathological observations, and of deductions from very extensive researches in comparative anatomy, lead us to anticipate much pleasure and instruction from their future labours. In the mean time, we admit, with the French reporters, that Gall and Spurzheim have brought forward several new observations, and have placed many anatomical facts in a more clear point of view.

ART. II. *Anatomico-Chirurgical Views of the Nose, Mouth, Larynx, and Fauces; with appropriate Explanations and Refe ences.* By John James Watt, Surgeon. The Engravings executed by Hopwood, from Original Drawings by Baxter: *together with an Additional Anatomical Description of the Parts.* By Mr. W. Lawrence, Demonstrator of Anatomy at St. Bartholomew's Hospital. Folio.

WE believe it would have been difficult to select an equal number of views, better calculated than these, to convey a clear and accurate idea of the shape, extent, and connexions of the cavities, which they are intended to represent.

The first Plate exhibits a view of the pharynx from behind, as it is seen when laid open by a longitudinal incision along the middle of its posterior parietes; the cervical vertebræ, and the muscles attached to them, having been removed. At the upper and fore part, are seen the openings

of the Eustachian tubes; the two orifices called posterior nares, by which the right and left cavities of the nose communicate with the pharynx; the margin of the perpendicular septum between these; and within the nose, the turbinated septa, and the superior and middle passages. Below, we observe the posterior surface of the velum palati; the posterior arch, the lower part of the anterior arch of the velum, and the uvula; the isthmus of the pharynx, and, through the isthmus, the surface of the root of the tongue, and a part of the tonsils on each side; the glottis, and epiglottis; and under these a convexity formed by the posterior part of the larynx.—The view terminates where the pharynx tapers into the œsophagus.

The second Plate contains three figures. The first and second figures represent the appearances of the parts belonging to the cavities of the nose and mouth, when the upper and fore part of the head has been divided by a section from right to left, beginning immediately behind the crista galli above, and terminating between the first and second grinding teeth, on each side of the upper jaw, below. The first figure is a view, from behind, of the anterior portion of this section. In it we see the perpendicular septum, separating the right and left cavities of the nose from each other; the height and breadth of each of these cavities; the turbinated septa, dividing them into compartments called passages, (meatus): the anterior portions of the ethmoidal cells and maxillary sinuses, and the place at which the latter communicate with the middle meatus of the nose. A front view of the posterior part of the same section is exhibited in figure second. Here we observe the posterior surface of the maxillary sinuses; the ethmoidal cells, and the septa and cavities of the nose, presenting the same appearance as in the former section; and, in addition to these objects, the appearance of the lower and back part of the cavity of the mouth; the upper surface of the tongue; the velum of the palate, with its two arches and uvula; the tonsils placed between these arches, and the isthmus of the pharynx.

The third figure of this Plate is a representation of the right cavity of the nose, and the right frontal and sphenoidal sinuses, brought into view by a section made parallel to, and a little to the right of, the perpendicular septum. A probe is introduced into the orifice of the sphenoidal sinus; and small portions having been removed from the anterior extremities of the turbinated septa, we are enabled to perceive the openings of the ethmoidal cells, of the frontal and maxillary sinuses, and of the nasal duct, through the latter of which a probe has been passed from its commencement at the inner angle of the eye. Opposite the middle meatus of the nose, the Eustachian tube is seen opening into the pharynx.

The third and fourth Plates are views of the right and left sides of the head and neck, divided by a section parallel to, and a little on the left of, the perpendicular septum of the nose; the upper part of the cranium and the brain having been removed. The third Plate exhibits the appearance of the right section. On the fore-part are seen the frontal sinus, the surface of the perpendicular septum of the nose, the right half of the cavity of the mouth, and a section of the tongue, shewing the direction of the fibres of the genio-glossus muscle of the same side. Behind, we observe, in succession from above downwards, the sphenoidal sinus; the pharynx, with the orifice of the Eustachian tube; the right side of the cavity of the larynx; the right vocal chords, and the ventricles of Galen, or sacculi laryngis, between them. The opposite section is represented in the fourth and last Plate. Here, instead of the perpendicular septum of the nose, as in the former Plate, we see the turbinated septa and passages; and by removing the first grinder tooth of the upper jaw, and turning back the left side of the tongue, the orifices of the ducts of the parotid, sublingual and submaxillary glands, are exhibited, with bristles introduced into them.

These views do not illustrate the internal or minute structure of the cavities, which they include. This, indeed, seems to have formed no part of the object of the work. Even in the coloured engravings, the colouring of the surfaces brought

into view is unnatural throughout. With respect to size, figure, and relative position, however, it appears to us that they exhibit every thing which is necessary to be known. If we are correct in this opinion, those who have experienced the difficulty of exposing actually in the body the parts in connexion, which are here represented, will readily allow to Mr. Watt equal merit for the conception of the sections which he has chosen, and the manner in which they have been executed. The explanations accompanying these views are full and accurate. We may venture, however, to suggest to Mr. Watt, though, in truth, the suggestion is but of trivial importance, that he might probably have chosen a happier title for his work. We can have no solid objection to the epithet *anatomico-chirurgical;* but it is one of those compounds which have so much of technical pedantry in their sound, that we should be reluctant to employ it, unless in cases of unavoidable necessity. In this instance no such necessity existed; for these views of the nose, &c. are, strictly speaking, no more chirurgical, than Soemmerring's views of the eye, or of the ear.

The description of the mouth, nose, larynx, and pharynx, by Mr. Lawrence, which are added to these engravings, is chiefly an abridgement of the remarks which *Bichat* has given us, on the structure and motions of the same organs, in different parts of his 'Anatomie Descriptive.' We peruse with pleasure, any thing that is either written or translated by Mr. Lawrence. But we think we should have read his part of the present work with more interest, and at the same time with much more advantage, if it had consisted merely of a few practical remarks, applicable to the organs which Mr. Watt had delineated. In our opinion, Mr. Watt's 'Views,' in themselves, but particularly when accompanied with such full explanations, scarcely required any additional anatomical description '*to render them intelligible.*'

ART. III. *Views of the Basis of the Brain and Cranium; accompanied with Outlines; and a Dissertation on the Origin of the Nerves: interspersed with Surgical Observations.* By T. J. Pettigrew. 4to. pp. 29, with Two Plates.

THE literary productions of foreigners, being unprotected by law, may be plundered without any fear of legal retribution. But this circumstance, instead of diminishing, would aggravate, in the estimation of every generous mind, the mean and contemptible characters of the transaction. Mr. Pettigrew seems to think differently on this subject: for he has not only caused the 'tabula baseos encephali'* of Soemmerring to be copied, without the slightest acknowledgment of the source from which it was derived; but also, with singular effrontery, has placed under the engraving the inscription, *T. J. Pettigrew direxit*, with no other assignable motive, than that of appropriating to himself, more completely, the recompense due to the labours of the above-mentioned very learned and skilful anatomist. The purchasers of this work will have occasion to regret, that the copy, which it contains, is not a faithful one; and that the most finished production of Soemmerring should have been altered by a person, who has given such specimens of his scientific acquirements, as we shall presently lay before the reader. If these changes were made in order to efface the marks of the rightful owner, the experiment has not succeeded: for the property can be very satisfactorily identified, in spite of the disguise under which it is exhibited.

The Plate of Soemmerring, which equals any thing we have ever seen, as a work of art, is still more admirable for the consummate fidelity with which the object is represented. All this might have been anticipated from the author's well-known talents and industry, and the great labour which he had bestowed on this particular subject. He had dissected the brains of about two hundred individuals, of all ages and

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* Folio, Frankfort on the Mayn, 1799.

nations, and of both sexes, and had most carefully investigated the connexions of the nerves with this organ. In addition to these, he had inspected more than two hundred brains of animals, and had examined attentively every plate on the subject. Having determined to exhibit, in his view of the basis encephali, a faithful representation of the most perfectly formed parts, he chose the brain of a very well-made male child of three years old, in the most recent state. This, being carefully removed from its containing cavity, was delivered to an artist, who had been long practised in delineating such objects, without any preparation, that all the parts might be preserved in their most natural condition. Any inaccuracy, that might have arisen from such soft parts subsiding and becoming flatter, was obviated by repeated examination and measurement of the cranium, and by reference to a plaister cast of its basis. After this statement, it will be hardly necessary to inform the reader, that Mr. Pettigrew's alterations have impaired the fidelity of the original representation in every instance.

The particular age of the subject, selected by Soemmerring, furnished a very interesting physiological conclusion, which we present in the author's words, as a much more agreeable specimen of matter and composition than any part of what Mr. P. pleasantly terms his 'dissertation.'

'The third point illustrated by this plate relates to the size and peculiar characters of the encephalon at this particular age. The parts are nearly equal in magnitude to those of the adult; nay, we shall sometimes see smaller brains in well-proportioned and by no means diminutive individuals, whose stature is complete. Compare this plate with the best representations, of which my treatise De Basi Encephali contains a perfect catalogue, and you will find that the latter do not exceed it in size. If not larger, it is certainly not smaller than the admirable posthumous plate of Santorini, which is proved, by the accompanying representation of the cranium, to have been taken from the adult. Nor is it less than Vicq d'Azyr's view of the same subject, which in elegance and accuracy surpasses the labours of all his predecessors. We ought not to be surprised at finding the encephalon so fully developed at this age, when we observe, that its actions

are so perfect, that children may be said to differ from adults, not in the quality, but the quantity of their ideas.' De Bas. Enceph. p. 13.

Some differences may be noticed in the proportions of parts; the cerebellum is rather larger, when compared to the cerebrum, and the medulla spinalis is rather smaller than in the adult. The nerves are, on the whole, more slender, round, and fibrous: those of the first pair are shorter, but much thicker; the trigemini and facial nerves are smaller, particularly the latter; while the auditory, in size and form, exactly resemble those of the adult. The perfect development of the ear at this period, and the small relative size of the face, account for the two latter facts.

Mr. Pettigrew chooses to state, that his view is taken from a boy ten years old; and, as he probably knew no reason why the brain should not grow from the third to the tenth year, he has had it drawn larger than that of Soemmerring, preserving, however, the same characters which we have just enumerated. The cerebellum is augmented as well as the other parts, and is consequently too large. The nerves of the sixth pair are very incorrectly exhibited. Each of these consists of a larger exterior, and smaller interior portion; both of which are here drawn of the same size. The auditory and facial, constituting together the seventh pair, are delineated with incomparable softness by Soemmerring; but they are hard and stiff in Mr. Pettigrew's figure, so as to resemble wood or metal more than nerve: and their origin is given altogether incorrectly; which is inexcusable, when so many true representations* of the parts exist. The intermediate fibres between the auditory and facial nerves are omitted. The eighth pair is very badly shewn. The nervus accessorius, which is not represented by Soemmerring, is added by the author, who makes it begin about the situation of the

* Soemmerring de Basi Enceph. et Originibus Nervorum; Gotting. 1778, tab. 1 and 2. Vicq d'Azyr Traité d'Anatomie et de Physiologie, pl. 17; pl. 30. fig. 2 and 3; et pl. 31, fig. 3. The intermediate filaments are excellently shewn in the latter figures.

first cervical nerve, instead of the fifth or sixth. The laminæ of the cerebellum are made concentric:—a vile blunder, which has been pointed out, and properly reprobated, by Vicq d'Azyr,* and committed by no modern anatomist.

In the Plate, which we have just criticised, the engraver has performed his part very well: it would perhaps have been unreasonable to expect the beauty and delicacy which we admire in Soemmerring's figure. The second table exhibits the basis of the cranium in a very tame and inexpressive style. It is much inferior to the view of the same part in the first fasciculus of Haller's Icones; and still further behind the 34th plate of Vicq d'Azyr.

For a 'dissertation on the origin [origins] of the nerves,' copious and valuable materials, which have never appeared in the English language, may be found in the writings of Soemmerring, Vicq d'Azyr,† Malacarne,‡ Gall, and others. A very elegant commentary is appropriately subjoined to the tabula baseos encephali, pointing out those physiological inferences, which this view would suggest. The dissertation of the same author, on the 'organ of the soul,'‖ in spite of its whimsical title, contains much good matter; and his treatise on the origins of the nerves is remarkable for its erudition, as well as its anatomical accuracy. Mr. Pettigrew has stolen from none of these works. We suspect, indeed, that the circumstance of their not being written in his mother tongue, rather than any honourable or conscientious motive, has restrained him on this occasion: at all events, we acquit him completely of plagiarism: we have seen nothing at all like his dissertation in any production, foreign or domestic, and therefore believe that it is throughout his own composition.

The text of this work, considered as an anatomical composition, might have been written by any pupil, who had at-

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* Lib. cit. p. 63.

† In his explanation of pl. 17, p. 48, et seq. and in other parts of his great work.

‡ Encefalotomia Nuova Universale, 8vo. Torino, 1780.

‖ Quarto, Konigsberg, 1796.

tended one course of lectures; except that it contains more blunders than we should have expected to find, unless he had been very inattentive; and such numerous instances of bad grammar and misspelt technical names, as would disgrace any youth of the most moderate education. The two opening paragraphs are rather a favourable specimen of the author's style and matter:

'The brain is that substance, which, with its meninges or membranes, form [forms] the contents of the cranium. Its membranes are by the generality of modern anatomists enumerated three; dura mater, tunica arachnoides, and pia mater.'

The originality of this description became more and more apparent as we proceeded in our perusal; we extract some of the new remarks, for the benefit of our readers. The spongy appearance of the inferior turbinated bones is said to be produced, without doubt, by the minute filaments of the olfactory nerve. p. 6. Some may question this, when they hear that Scarpa, and other anatomists of like inferior note, have never been able to trace the said nerve beyond the edge of the superior turbinated bone. We have always considered the eye-ball to be the organ of vision, and never expected the circumstance to be questioned, even in this sceptical age: but our author affirms, that the optic nerves are the organ of that sense. p. 7. He asks, 'Is it not probable that the raphe of the corpus callosum is formed by the pulsation of the arteriæ callosæ situated on each side of it?' p. 6. We think not; because the arteries are not in contact with the body. The filaments mentioned as proceeding from the opthalmic [ophthalmic] nerve to the great sympathetic, p. 10, have been described by no preceding anatomist: why was not the author more particular in his account, that he might establish his claim to the discovery? The ciliary nerves not only 'extend even to the iris,' p. 12, but are distributed solely to that organ. The lingual branch of the inferior maxillary 'takes its course through the tongue, and then ramifies very minutely on the papillæ and tip.' p. 14. Does it turn back again to these parts after going through the

tongue? 'The portio mollis, seu nervus accousticus [acusticus] forms the true auditory nerve.' We always thought that the portio mollis was itself the auditory nerve. 'It accompanies the portio dura to the foramen communis nervorum, to be distributed to the lamina spiralis of the cochlea, the vestibulum, where it is called barbula, and through the semicircular canals, where it is denominated ampullæ!' p. 17.

As we have hinted that Mr. P. does not write the best grammar, it is only fair to add an apology which he makes for his failing in this respect; although we confess that it by no means satisfies us of the propriety of making a verb singular agree with a plural noun, or vice versâ. 'I beg leave to observe, in apology for my deviation from grammatical propriety, that for the sake of precision, or where it admits of more explicit definition, that I have used a description of one nerve only, though under the head of the plural number.' We think it right to notice, for the benefit of anatomical teachers, the solicitude which the author feels on a point of nomenclature: the spinal canal should, he says, be more properly termed *specus vertebrarum*. Now, as Ainsworth defines specus, a cave, den, or lurking place, it seems particularly appropriate to the tube containing the spinal marrow, and will, of course, be immediately adopted in that sense.

A few specimens of the technical words in this curious work must be added. *Opthalmic, Gasseri, clynoid,* and *sphænoid,* are every where used, instead of ophthalmic, Glaseri, clinoid, and sphenoid. *Viduan* nerve and canal, for Vidian; canalis *viduanis* for Vidianus; foramen *incisorum* for incisivum; indeed the substantive foramen is made to agree with adjectives of all genders and numbers; viz. communis nervorum, seu auditorii internum, superciliaris, lacerum superior and inferior, and auditorii interna. The following are mentioned as names of nerves; palato-maxillary, seu pterigo-palatina, spheno-palatina, and laryngea externi.

If we have devoted to this bungling act of piracy a greater share of attention than it deserves, it is because we deem it

a national disgrace. We have considered the contemptible light in which such a transaction must exhibit our literary and scientific acquirements in the eyes of foreigners; we have fancied the feelings of indignation with which they will observe us copying the labours of others, and degrading, like the Italian tyrant who tied the living to the dead,* a fine specimen of art by the accompaniment of so barbarous a commentary.

Even this production has found a critic to commend it. In a monthly publication,† the decisions of which are notorious for ignorance and partiality, Mr. Pettigrew's work is said to contain 'a simple, perspicuous and accurate description.' The remark which follows shews the dangers to which one is exposed by well-meaning but ill-judging friends. The merits of the publication are ascribed to the author's having imitated his anatomical preceptor, Mr. John Taunton, who is gravely stated to be 'one of the ablest practical anatomists, and useful teachers of the present age!'

ART. IV. *An Essay on the Torpidity of Animals.* By Henry Reeve, M. D. Member of the Royal College of Physicians of London, and Fellow of the Linnean Society. 8vo. pp. 152. Longman and Co.

IT is often an amusing part of our critical labours to observe the apologies and excuses that are set up by authors for the publication of their works. 'Request of friends' is, indeed, out of date, having been so frequently hacknied as to be no longer *usible*. The desire of seeing one's name in print, although often a powerful motive, is one which a writer does not choose to profess; and a disinterested love of promoting knowledge, although it be professed, is one for which the author seldom obtains much credit. Dr. Reeve's reason for

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* Mortua quinetiam jungebat corpora vivis. Virgil.

† Antijacobin Review, November, 1809.

publication is quite of a new description: he informs us, that he gives to the world a production *confessedly imperfect*, because he promised to investigate the subject in his inaugural dissertation. We shall not stop to inquire, how many individuals had read the dissertation, or how many recollected the promise; but we will venture to assert, that if any such there be, they would willingly have excused him for withholding his essay some time longer, until it might have been published without any apology, or even if 'the intervals of professional employment' had become too much contracted, they would have cheerfully pardoned the final abandonment of the scheme.

The subject of hybernation is a very curious one, and well deserves to be farther investigated. In a work treating exclusively of it, we expect either new experiments and observations, or, at least, a well digested account of all that is hitherto known upon the subject. As to the first of these points, although Dr. Reeve does, in his preface, talk of his own experiments and observations, and although he mentions the circumstance of his having brought some marmots from Switzerland to Vienna, and having kept them there during the winter, and having, when he left Vienna, committed them to the care of his friend Dr. Schriebers, the professor of natural history, who lodged them in the imperial menagerie at Schoenbrunn, but from whom he has since heard nothing more respecting them; yet the only information which we can derive from this anecdote is, that the author has travelled through Switzerland and Austria: we learn from it nothing new respecting hybernation. It is, then, entirely upon the second source that the merit of the work must depend. And here we think it necessary to remark, that this is not a subject, like many of those in physiology, where the information is scattered through a great variety of scarce books, through long sets of periodical works, or through the transactions of learned societies, which are only to be met with in the libraries of the metropolis. The materials of which the essay, now before us, is constructed, are neither numerous nor recondite: Hunter, Spallanzani,

Smellie, Pennant, Pallas, and a few other equally well known authors, compose the round of his researches. Dr. Reeve, we must say, is thus cut off from another source of applause, and his merit is necessarily confined to that of giving a clear and accurate view of the opinions of the authors whom he quotes. By this standard, then, must we measure his claim to our approbation.

The accuracy, which we consider as so essential to a performance like the present, ought to be conspicuous both in the language and in the sentiments. We have, however, in the perusal of Dr. Reeve's essay, met with deficiencies on both these points. Almost at the commencement we have the following observations.

'Man is enabled, by a more perfect organization, to preserve nearly the same temperature under great extremes of heat and cold. Most of the inferior animals are confined within certain limits; but the human constitution has sufficient vigour to withstand the severity of the most rigorous climates, and sufficient flexibility to adapt itself to the most diversified circumstances.'

Here it is implied, that the respiratory organs of man are more perfect than those of other animals, which is by no means true; the structure of the sentence would lead the reader to suppose, that he is the only animal that can preserve the same temperature under great extremes of heat and cold; and again it is stated, that this depends upon greater vigour of constitution. Lastly, the consideration is entirely omitted, that one great cause, why man can exist in such a great variety of situations, is, that, by the exercise of his reason, he is enabled to counteract external circumstances. This we give as an example of that kind of laxity, both of style and of ideas, of which not a few instances present themselves in this performance.

Dr. Reeve thus announces the plan which he purposes to follow.

'I propose first to describe the phenomena, common to all those animals which become torpid during winter, and then to draw some general conclusions, and to make some general remarks, such as the facts stated authorize me to infer.'

The phenomena of torpidity are thus described.

'During their state of hybernation, the temperature of the animals is considerably diminished, the circulation of the blood becomes slower, and is sometimes almost entirely stopped, the respiration is rendered less frequent, and, when the torpor is complete, wholly suspended; the digestion ceases, and the action of the muscular and nervous powers is, for a time, suppressed.'

The author then proceeds to enlarge upon each of these circumstances, and to adduce authorities in proof of their existence. He has, however, added little that is of any great value: what he brings forward is from the common sources, and was before perfectly well known.

Dr. Reeve affirms, that the motion of the heart in torpid animals, although imperceptible, cannot be totally suspended, because the blood remains fluid. Is it, then, solely to a motion, so small as to be imperceptible, that the fluidity of the blood, while it remains in the vessels, is owing? Would it then continue fluid, after being discharged from the arteries, if it were subjected to the same slight degree of agitation? Yet to this conclusion the argument of Dr. Reeve would inevitably lead us.

In the third section the author endeavours to prove, that animals, when in a state of complete torpor, have their respiration entirely suspended. In support of this opinion, he quotes some well-known experiments of Spallanzani's, which, however, do not fully prove the position; and he concludes with the following very precise information.

'My friend Dr. Smith, the learned president of the Linnæan Society, informs me, that he observed that the respiration of a tortoise, kept in a room in London, was always slower in winter than in summer.'

His learned friend Dr. Smith, for whose character and talents we profess to feel the highest respect, little imagined that a circumstance, which he probably mentioned over a dish of tea, or at a card table, would have been thus pom-

pously brought forwards, as a fact calculated to substantiate any important physiological doctrine.

The second chapter, on the cause of torpidity, we do not consider as more entitled to commendation than its precursor. It commences with an assertion, which is grossly inaccurate, that hybernating animals differ from others in their internal temperature, which is only a few degrees above that of the surrounding medium. Has the author forgotten, that warm-blooded animals hybernate as well as those that are cold-blooded; or that he has himself stated, that the temperature of the hedge-hog is 97°, and that of the dormouse, the marmot, and the bat, above 100°? With respect to the causes of torpidity, it appears to us, that Dr. Reeve has not in any degree diminished the difficulties which before existed on the subject. He observes, that the abstraction of heat, combined with a want of food and of an oxygenated atmosphere, renders an animal torpid; but we are not at all enabled to explain in what way it is, that those circumstances, which would, in most instances, destroy life, in others only suspend its functions. All the effects that have been mentioned above are but secondary; and we are not informed to what quarter we are to look for the primary agent. Dr. Reeve, indeed, confines our search within narrow limits; for he informs us, that the cause of torpidity resides neither in the blood, nor in any of the abdominal viscera, nor in the nervous system.

We think it unnecessary to dwell long upon the controversy, into which Dr. Reeve enters, concerning the question, Whether torpidity be the natural state of animals?—because it is entirely verbal; and we shall pass over, with as little ceremony, another discussion on the knotty point, Whether torpidity is produced from an incidental habit, or whether it be a natural propensity? We apprehend, that we shall be better able to answer this question, when the author informs us, whether, when he is drowsy, he falls asleep from habit or from instinct.

In the fourth chapter, we have some general deductions

from the facts contained in the former parts of the essay. In these conclusions we are, for the most part, disposed to acquiesce; yet, we must remark, that the first of them, which states, 'that the temperature of animals is essentially connected with the function of respiration,' seems directly contrary to the opinion, that the breathing is entirely suspended in torpidity; because, although the temperature is much diminished, it is always somewhat superior to that of the surrounding medium. From what source is this heat produced?

The fourth conclusion is as follows: 'torpidity is natural to some animals, and is the means furnished by nature for preserving life under circumstances of difficulty and danger.' We object to the latter clause of this sentence, as being very vaguely expressed; difficulty and danger apply to a variety of circumstances that have no connexion with torpidity. Besides, this refers only to its final, not to its efficient cause, and, interesting as the development of final causes may be on proper occasions, we think that it does not properly fall within the scope of the present essay.

Upon the whole, then, we cannot but look upon Dr. Reeve's performance in an unfavourable point of view; it contains neither new facts, nor new and accurate deductions from such as were already known. Dr. R. is evidently too anxious to become an author. We hope that he will not impute our advice to any malevolent intention of depressing rising genius, when we recommend, that he should not again venture into the press, until he is quite certain, that he has something which is worthy of being submitted to the public.

ART V. *A Practical Materia Medica, in which the various Articles are fully described, and divided into Classes and Orders, according to their Effects. Their Virtues, Doses, and the Diseases in which they are proper to be Exhibited, are fully pointed out. Interspersed with some Practical Remarks, and some Select Formulæ. To which is added, a General Posological Table. Intended principally for the Use of Students and Junior Practitioners.* 12mo. pp. 301. Highley.

THIS is a work on which we do not think it necessary to bestow any minute or laboured criticism. As, however, its cheapness (for it has this merit) might cause it to be resorted to, by those who may wish to make a great bargain, and to obtain a knowledge of the whole mystery of physic for a crown, we shall offer a few observations to shew, that it is not worthy of their implicit confidence. The first thing upon which we shall remark, is the arrangement. The author, we suppose, calls himself a Brunonian, for he has classed almost all the articles of the materia medica under the title of stimulants, using this term in that vague sense in which it was employed by Brown, to signify every substance which has any action upon the body; having previously taken it for granted, that every action must be the effect of a stimulus; so that, in fact, the word will convey no meaning at all. Under the class of stimulants, we have the orders of general stimuli; narcotics; alexipharmics; tonics, astringents, and antispasmodics, thrown together; diaphoretics, diuretics, cathartics, emmenagogues, expectorants, sialogogues, emetics, carminatives, lithontriptics, and aphrodisiacs. We shall say little respecting this classification, except, that it can be of little or no use to the 'students, and junior practitioners,' for whom the work was principally intended. Were they to attempt to stimulate their patients by giving them narcotics; or were they to imagine, that tonics, astringents, and antispasmodics, were so similar in their operation, that they might be used promiscuously, they would soon find themselves grievously disappointed.

The author, in treating of the individual articles which compose the different orders, prefixes to each order a definition. Narcotics are thus defined: 'those stimuli which act principally on the nerves, increasing their energy, and which, in their secondary effects, produce sleep.' Opium, which stands first in the list, under particular circumstances, produces effects which exhibit the appearance of increased action; and therefore, although we would not call it a stimulant, yet we admit, that it may be so given as apparently to excite the nervous energy. But that this effect was ever produced by the remaining articles of this order, belladonna, conium maculatum, stramonium, solanum, &c. we absolutely deny, except in the brain of a Brunonian. We were curious to know what kind of substances composed the order of alexipharmics, and how they were designated. The following is the definition of them. 'Those stimuli which act principally upon the nerves, but which do not excite, in an equal degree, the sanguiferous system.' The substances thus defined, are valerian, serpentariæ, asafœtida, ladanum, styrax, musk, amber, pimpernel, cardamine pratensis, pœony, castor, and cassumunar. According to custom, the author has swelled out his list of articles to an enormous extent, being desirous, as it would appear, of giving a place to every substance which may have been ever recommended by any German professor, or any old woman. As an example, we shall take the first ten articles of the order diaphoretics. Agrimony, angelica, arum maculatum, camphor, carex arenaria, teucrium chamædrys, daphne mezereum, guaiacum, imperatoria, and origanum vulgare.

We have hitherto noticed our author's first class only; we must now proceed to the two remaining ones. Being determined not to be the servile copyist of his great master, he had added two others, under the title of atonics and vermifuges. Atonics consist of bleeding, issues, and setons, nauseants, cathartics, gases, and abstinence. It is certainly by a bold metaphor, that the three first and the last can be called articles of the materia medica: the two next have already been included under the first class, so that the same

substances may be either stimulant or atonic, at the pleasure of the author; and with respect to the gases, we have reason to suppose, that they have quite different effects from each other, some being highly exciting, and others being as instantaneously sedative. Our intelligent readers are well aware, that the specific action of vermifuges is a point that admits of much doubt: of those substances that seem to be the most active in expelling worms, some are merely cathartic, and others tonic; and if we subtract all those from the list, we apprehend, that the worms may feel themselves very much at ease respecting the rest. But, even were the specific action of vermifuges established, we see no reason why they should be admitted to the honour of a distinct class, more than other substances, whose specific virtues are less dubious, such as sulphur and mercury. To say that sulphur cures itch merely as a diaphoretic, or that mercury cures syphilis as a sialogogue, is carrying hypothesis rather farther, than what we conceive the most determined Brunonian would venture to do.

Our remarks being extended to as great a length as we think ought to be allotted to the work, we shall not enter into an examination of any of its particular parts; but we shall give it as our opinion, that it will be found by no means free from errors and inaccuracies, and that some of them are such as materially to diminish its value as a practical treatise.

ART. VI. *Analysis of the Carbonated Chalybeate, lately discovered near Stow. With Observations on Carbonic Acid and Nitrogen Gas, on the Animal Economy, &c.; and Extracts from some of the best Authorities we have, relative to the Use of Chalybeates. To which is subjoined a Glossary of the Technical Words necessarily made use of in the Work.* By R. Farmer. 8vo. pp. 68. Lackington, Allen, and Co.

MR. FARMER informs us in his preface, that he is a novice in the art of performing experiments; a confession which might seem to indicate a degree of amiable candour, were

there the least probability that the fact could have remained concealed. As to the indulgence which he claims on the score of his inexperience, we confess that we are very little disposed to grant it; it may, indeed, account for the imperfections of his work, but it affords no satisfactory reason for its publication. Turning, therefore, a deaf ear to all appeals of this kind, we shall proceed to examine the merits of the pamphlet, without inquiring into the merits of the author.

After giving a description of the situation of the spring, the strata from which it issues, and the general aspect of the surrounding country, Mr. Farmer proceeds to detail the physical properties of the water. Among other circumstances, he mentions, that after heavy rains, the quantity of water is much increased, and its specific qualities proportionably diminished, a fact which, we apprehend, must prove a material inconvenience to those who use it for medicinal purposes. We then enter upon its chemical analysis; and from the application of the usual tests, we learn that it contains iron, carbonic acid, with some earthy and neutral salts. In speaking of the experiments, it is not in our power to give a decided opinion respecting their accuracy; at the same time that we may be enabled to form a pretty good judgment upon the subject. Now, we do confess, that we doubt much, whether they can be relied on. We observe, on more than one occasion, a want of dexterity in the management of chemical re-agents; and we meet with some statements, which are so singular, as to require the evidence of a more experienced chemist than our author appears, or, indeed, professes to be. We are told that one quart of the water produced by evaporation only eight grains of solid residuum; and it is afterwards stated, that when a quart of the water is boiled for fifteen minutes, five grains of precipitate are separated from it, a very unusual circumstance, and one which seems scarcely compatible with the acknowledged nature of its contents. A more singular statement is, however, made with respect to its gaseous ingredients. The water is said to contain one half of its bulk of gas, which may be expelled by boiling: of this, somewhat less than one fifth is carbonic

acid, and there is about the same quantity of oxygen; while all the remainder, *i. e.* more than three-fifths of the whole, is said to be nitrogen. The author observes, 'this is a greater proportion of nitrogen gas than has been found in any water yet analyzed. It does not naturally combine with water; and what is the medium that connects them, is not known. No method of absorbing it by water, or any other menstruum, has yet been devised.' We mentioned above, that a quart of the Stow water contains only eight grains of solid contents; and of these, one three quarters is said to be carbonate of iron; a proportion which so greatly exceeds that of other mineral waters, as to strengthen those suspicions which we had previously entertained of the author's accuracy. He takes a good deal of pains to shew, that this water contains the carbonate of manganese; and he favours us with a piece of theory, which will, perhaps, by many persons, be thought *very ingenious;* viz. that manganese is contained in vegetables, and that it is the principal agent in giving them colour, and enabling them to absorb and discharge oxygen, &c.

After completing the examination of this particular spring, the author makes some observations on mineral waters in general, and gives us some quotations from Saunders, and others, who have written on the subject. We cannot, however, compliment Mr. Farmer upon the original matter of this part of his work. Having ascertained, as he supposes, the presence of a large quantity of nitrogen in the Stow water, he concludes that this substance must serve some purpose in the animal economy, and he thinks it incumbent upon him to point out its use; and, because some obscure second-rate French chemist has asserted, that nitrogen is discharged from the skin, Mr. Farmer boldly affirms, that when taken into the stomach, it must promote perspiration, and, of course, remove eruptive disorders. It would be happy for mankind if diseases were removed as readily as hypotheses are formed. Again; because Fourcroy has stated, that the genuine difference between animal and vegetable matter consists in the nitrogen contained in the former, and that the addition and

fixation of nitrogen is the principal phenomenon of animalization: so, by means of a little of that agility, for which physiologists have been always justly celebrated, the author immediately jumps into the conclusion, that nitrogen must assist in digestion, and that it must stimulate the secretory organs, and 'check the irritability occasioned by the activity of an extra proportion of oxygen in the blood.'

Our opinion respecting this pamphlet need not be farther expressed. We shall recommend to the author, before he publishes any more of his experiments, to perfect himself in the practice of his art, and not to attempt to form physiological hypotheses, until he has made himself much better acquainted with the science, and can distinguish between a fanciful conjecture and a rational deduction from established facts.

ART. VII. *Pharmacopœia Collegii Regalis Medicorum Londinensis.* 4to. et 18mo. Longman and Co.

ART. VIII. *The Pharmacopœia of the Royal College of Physicians of London,* 1809. *Translated into English, with Notes, &c.* By Richard Powell, M. D. &c. 8vo. pp. 478. Longman and Co.

ART. IX. *The Pharmacopœia of the Royal College of Physicians of London,* 1809. Translated by Hector Campbell, M. D. Small 8vo. pp. 164. Miller, Chancery Lane.

WHETHER the knowledge of disease be really increased during the last twenty years, or whether we are better acquainted with the medicinal qualities of substances, is a question which may admit of discussion. But no one can doubt, that, during this period, the science of pharmacy has improved; the rapid extension of chemistry has of course rendered us more expert in all the chemical operations to which the articles of the materia medica are subjected; while the researches of the botanist have ascertained the

natural situation of many vegetables, which were before obtained from unknown sources, and have thus put it in our power to procure them with greater facility, and in a state of greater perfection. Besides these considerations, which might appear sufficient to induce the legalized guardians of the profession to make a revision of their pharmacopœia, a still stronger motive is derived from the circumstance, that several new, and particularly active substances, are daily coming into general use; and it is of the first importance, that some standard should be agreed upon, by which the practitioner may be assured of having an article, always prepared in the same manner, and possessed of an uniform strength. The bad effect which must necessarily arise from the want of this kind of standard, may be illustrated by what has taken place for some years with respect to the tincture of digitalis. This substance is daily employed in prescriptions; it is most powerful in its operation upon the body; and, when administered in too large a dose, produces the most deleterious effect: yet, the fact is, of this very tincture there were two formulæ employed, one of which was exactly twice as strong as the other; the one being a saturated tincture, made with four parts of the spirit to one part of the leaves; the other being the recipe taken from the New Edinburgh Pharmacopœia, prepared with only half the quantity of digitalis, and which is now adopted by the London College. Yet how many practitioners may be supposed not to have been aware of this difference; or, even if they were so, how uncertain is it into what hands a prescription may chance to fall! Nothing but a direct interference of the higher powers can effectually remedy such evils; and we regret, that, instead of exercising too much authority on this point, they should suffer themselves to fall under the imputation of tardiness or negligence. So far from thinking it incumbent upon the College to offer any kind of apology for revising their Pharmacopœia 'after a lapse of scarcely 22 years,' we think that they are bound to shew some good reason why it was not done long ago; and why, as soon as any article of the materia medica comes into general use, they do not imme-

diately fix upon and publish a standard formula for its preparation.

Besides this kind of revision and alteration of the Pharmacopœia, there is another species of reform which they have adopted, respecting the propriety of which we are less decided, and which rests altogether upon a different foundation. We refer to the introduction into pharmacy of the scientific nomenclature of chemistry and natural history. As, however, this has already been made the subject of controversy,* and would lead us far beyond our limits, were we to attempt to enter fully into the merits of the question, we shall only offer a few incidental remarks upon it in the course of our observation of the several parts of the work.

The preface, which we are informed proceeds from the pen of the President, we conceive deserves every praise, as a specimen of elegant latinity; and, what is much more important, it is candid and unassuming: and while it claims a degree of merit for the pains that have been bestowed upon the correction of the work, it appreciates in the most modest terms the probable utility of their labours. In point of style, Dr. Powell's translation is very inferior to the original.

The proper adjustment of weights and measures is a matter of prime importance; and here the College have introduced a great, but, as we think, a very necessary and judicious alteration; they have determined to employ different terms and different symbols to denote weights and measures, and, in the administration of small quantities of fluids, they have abolished the practice of dropping, and no longer employ the term drop, but divide what they call the fluidram, i. e. the 8th part of an ounce, into 60 equal portions, to which they give the appellation of minims: these minims, like all other fluids, are to be measured by glass vessels graduated for the purpose. For this capital improvement

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* See Dr. Bostock's Essay on the reform of the pharmaceutical nomenclature, and the critiques upon it, in the London Medical Review, the Edinburgh Med. Jour. and the Monthly Review.

in pharmacy we think the public are certainly indebted to Mr. Shuttleworth, an eminent apothecary in Liverpool, who published an ingenious pamphlet on this subject more than two years ago, in which he proposed a plan, substantially the same with that which is here adopted. We could scarcely expect or desire, that, in such a work as the Pharmacopœia, the College should state the sources whence they derived all their new ideas and improvements; but, most undoubtedly, Dr. Powell, in his translation and commentary, should have explicitly acknowledged the obligation. A note, in which he says, that 'a useful pamphlet has been published on this subject by Mr. Shuttleworth of Liverpool,' gives a very imperfect and inadequate conception of the service which this gentleman has conferred upon the profession.

We next come to the materia medica, in which there are many changes, not only of nomenclature, but also several new articles introduced, and several of the former omitted. With respect to names, their rule has been, not to adopt the precise scientific appellation, as has been done by the Edinburgh College, nor, on the contrary, to retain any unscientific term, but to take the generic or specific title, if either of them had been before employed; or, if not, to take whichsoever of them is the more appropriate; and in no instance to use both, unless two species of the same genus be both articles of the materia medica. Thus, we have asafœtida and belladonna, althæa and anthemis; the two first being specific, and the two latter generic terms. Among entirely new names, some of the most important are acaciæ gummi for gum Arabic, anthemis for chamomile, cinchona lancifolia for cinchona officinalis, coccus for cochinella, and lytta for cantharis; every one of which, we think, might much better have remained as before: the substitution of conium for cicuta may be admitted as a correction of an acknowledged error. There are many changes in the nomenclature of the chemical substances. In general, with respect to saline compounds, the College have reversed the usual order in placing the base first, as ammoniæ murias, instead of murias

ammoniæ. They assign the following reason for this innovation.

'In the medical application of a salt, the base is of primary importance, in which any accidental mistake would be of far the greatest consequence in compounding a medicine: and those who are used to the subject, well know the greater value and force of the first, over any subsequent word, used for a name, either upon the label of a bottle, or in the prescription of a physician.'

We cannot see the force of this reasoning; and we regret that this deviation from the usual custom has been determined on. Where the name of the substance can be expressed in one or two words, they have adopted the modern scientific terms; but where this is not the case, as in the instance of alum, they still retain the old names. The substances introduced are of considerable importance: among others, we have arsenic, belladonna, the yellow and the red bark, called cinchona cordifolia, and cinchona oblongifolia, names less likely to be applied correctly than the old ones; angustura, which we think is very unfortunately metamorphosed into cusparia, hyosciamus, hop, tobacco, dolichos, lichen, and toxicodendron.

The arrangement of the preparations and compounds is considerably altered, and we think improved; the chemical articles take the lead, and bear the order of acids, alkalies and their salts, earths and their salts, preparations of sulphur, metals and their salts. Distilled vinegar is improperly omitted; for, although as a chemical agent it may be considered merely as diluted acetic acid, yet its sensible properties are different, and it is applied to different purposes. The citric acid is introduced, and the strength of the diluted nitric and sulphuric acid is very much reduced. There is a good deal of alteration in the names of the alkalies, depending upon their relation to the carbonic acid; the ammonia preparata of the old edition is now ammoniæ carbonas, the former aqua ammoniæ is now the liquor ammoniæ carbonatis, and the former aqua ammoniæ puræ is now the simple liquor ammoniæ. The present nomenclature

is correct, but it requires little sagacity to foresee in it a fruitful source of error. The substitution of *liquor* for aqua, to express an aqueous solution, is a change, the cause or utility of which we do not perceive. In the mineral alkalies we have a carbonate and a sub-carbonate; pure potash is called potassa fusa, an unscientific term, and not according with the principles of the nomenclature: perhaps the College may have added the word fusa in order to prevent the mistake which might arise from the pure potash and the sub-carbonate, which is generally called simply potash. Such a mistake is likely enough to occur, but we do not think it will be prevented by the present expedient.

The section on the metals and their preparations is one of the most important parts of the Pharmacopœia, and one on which the College seem to have bestowed considerable pains, if we may judge from the number of alterations that are admitted into it. The antimonium calcinatum et vitrificatum, and the crocus antimonii of the old edition, are superseded by the oxydum antimonii, sulphur antimonii præcipitatum is now antimonii sulphuretum precipitatum, antimonium tartarizatum has only received the alteration of a single letter, pulvis antimonialis remains as before, and we have a useful addition of a liquor antimonii tartarizati, a standard solution of tartarized antimony. There is, perhaps, no preparation in all pharmacy which has undergone more changes than tartar emetic: formerly the College directed it to be prepared by boiling together the crocus of antimony and the crystals of tartar; but they now prefer the simple oxide of antimony, formed by precipitating a nitro-muriatic solution of the metal with the sub-carbonate of potash. We think the College are right in preferring a precipitated oxide, which may be presumed to be a more uniform and definite preparation, than any formed merely by a dry heat. The preparation of arsenic, which is introduced, is the formula of Dr. Fowler, viz. the arsenite of potash; it is directed to be coloured with the compound spirit of lavender, in order to prevent its being mistaken for common water; but we think it fully as probable, that a small phial containing a substance

resembling the compound spirit of lavender in its colour, smell, and taste, should be mistaken for this substance, than that, if it had been without the lavender, any one should drink it off as so much water.

The mercurial preparations have undergone a considerable change. And, in the first place, with respect to their nomenclature; the corrosive sublimate and calomel are styled the oxymuriate and the sub-muriate of mercury, an alteration which we think, in every respect, unfortunate and injudicious. In the first place, it is not clear that the names now adopted are scientifically correct; it is, indeed, probable, that corrosive sublimate contains more oxygen than calomel, but this is nearly all that we know upon the subject: whether the title of simple muriate be strictly applicable to either of them, is uncertain; the Edinburgh College have given it to corrosive sublimate; and Dr. Thomson, in his System of Chemistry, to calomel. But even granting that this point were ascertained, and that we were assured of the correctness of the present designations, is there not every reason to apprehend that the similarity of the names may produce mistakes, and those of the most fatal kind? We must take the profession of medicine in all its branches as it now exists, and let us ask, Whether the greatest part of those, who are in the habit of writing or compounding prescriptions, will either understand the meaning of the *oxy* and the *sub* prefixed to the muriate, or that they will be likely at all times to apply them correctly? We have, as in the case of the tartarized antimony, a standard solution of the corrosive sublimate very properly introduced; hydrargyrus cum creta remains as before; red precipitate is named hydrargyri nitrico-oxydum, an expressive and appropriate term; and the grey oxide of mercury is inserted. We have then the red oxide, the former hydrargyrus calcinatus, hydrargyrus precipitatus albus, the old calx hydrargyri alba, hydrargyrus purificatus, and the red sulphuret of mercury; the black sulphuret, the hydrargyrus cum sulphure, is omitted.

After the metals come the different vegetable preparations, the expressed oils, distilled oils, distilled waters, and the

decoctions: among which are the following new ones; the compound decoction of aloës, the decoction of woody nightshade, of liverwort, of oak-bark, of seneka, and of elm-bark. The infusions are now properly separated from the decoctions, and form a long list, principally of new preparations. We have the infusion of chamomile, of horse-radish, of orange-peel, colomba, or, as the College have chosen to call it, calumba, of cloves, cascarilla, catechu, bark, cusparia, the old angustura, fox-glove, linseed, quassia, rhubarb, simarouba, and tobacco. We approve much of these additions: to have standard preparations of these infusions, will facilitate prescription, and will tend to improve the practice of medicine by making it more uniform. Of the mucilages there are but two, that of gum Arabic, and of starch; quince mucilage is removed, without any just cause, to the decoctions; and that of tragacanth, we are inclined to think, improperly omitted. The extracts are considerably more numerous than before, and under this title are now included the succi of former editions. The new extracts, are those of aconite, aloës, belladonna, hops, henbane, rhubarb, sarsaparilla, dandelion, and a simple extract of colocynth. Some of those of the former Pharmacopœia are omitted, that of scurvygrass, of elder berries, of broom tops, of rue, savine, hellebore, cascarilla, and senna; the last, we think, improperly. The emulsions which went by the name of milks, are now styled mixtures; and Dr. Griffiths' famous recipe appears under the title of the compound mixture of iron.

Among the tinctures, we meet with some additions: we have a tincture of capsicum, of fox-glove, a simple tincture of guaiacum without the ammonia, a tincture of hops, of henbane, and of kino, all of which will be generally thought to have been properly introduced, though they are not of equal value. The old camphorated tincture of opium is now changed to compound tincture of camphor, a whimsical appellation, and one not warranted by its composition, in which the camphor bears a smaller proportion than either the opium or the benzoin: the oil of anise-seed is also omitted. The tincture of Peruvian balsam, of the balsam of Tolu,

of galbanum, and of savine, are discarded; the two chalybeate tinctures are placed among the preparations of iron. We have a class of ætherea introduced, one of acetica, and one of mellita, names which sufficiently designate their properties. There are some new syrups, among which that of senna will prove convenient as a laxative for children. The powders stand nearly as before, but the pills have received some accessions: Plummer's pill, after having enjoyed an independent reputation for a great number of years, is at last received among the authorized formulæ. The remaining articles are classed under the heads of animal substances, plasters, cerates, ointments, liniments, and cataplasms.

These remarks will enable our readers to form a pretty accurate idea of the nature and extent of the changes that have taken place in this new edition of the Pharmacopœia. We conceive that they will agree with us, that almost all the new admissions are proper, that most of the substances and preparations omitted may be dispensed with; and that, provided the nomenclature must be modernized, it has been done, except in a few instances, with caution and judgment. The performance reflects much credit upon the learned body from whom it proceeds, and will not suffer in its reputation, by a comparison with the similar publications of the Edinburgh and Dublin Colleges: it is unquestionably much superior to either of them.

We must say a word respecting Dr. Powell's translation, which is to be regarded as an authentic work, he having been expressly deputed by the College to undertake the office of translator. The translation is very faithfully executed; so much so, indeed, that we have been led to suspect that its composition may, in point of fact, have preceded that of its supposed original. At all events, we have not observed any passage in which the sense of the Latin is not exactly transfused into the English. The notes are generally valuable; but we think it was incumbent, either upon the College or upon Dr. Powell, to have published a simple translation without any notes, in order that there might have been a small English edition of the same cheap and commodious

form with the smaller Latin one. We are sorry to observe that Dr. Powell's translation is not printed so accurately as it ought to have been: there are, indeed, two errors of such importance, that we think it absolutely necessary, either that the sheets should be cancelled, or that every individual copy should have the correction inserted with a pen; we refer to the mistakes concerning the proportion of arsenic and corrosive sublimate in their respective solutions.

After we had written this article, another translation of the Pharmacopœia was put into our hands, executed by Dr. Campbell. He points out in his preface the circumstances in Dr. Powell's work upon which we have animadverted, its inaccuracy, and its costliness: but the first he exaggerates, and of the second he speaks in terms of unnecessary severity. This is the more inexcusable, that Dr. Campbell's own translation is disfigured by several gross errors. In the directions for preparing the compound decoction of sarsaparilla, for example, we are desired to 'take of Mezereon root bark *four ounces three drams*.' In the recipe for the syrup of senna, the water is omitted: and in the 'Table' at the end of the volume, the *New Names* are called FORMER NAMES, and the *Former Names* NEW NAMES!

ART. X. *Pharmacopœia Chirurgica; or, a Manual of Chirurgical Pharmacy, comprising all the valuable Formulæ of our several Pharmacopœias appertaining to this Branch of Science: with Notes, and Observations, as well on the Method of Compounding, as, likewise, on the Properties and Use of each.* By J. Wilson, Surgeon, Huntingdon, Honorary Member of the Medical Society of Guy's Hospital, and several Years Assistant Apothecary to that Institution. pp. 236. Cox.

IT is much to be wished that the Royal College of Surgeons would authorize, and publish, a pharmacopœia chirurgica:—for, although the Pharmacopœia, published by the College

of Physicians, contains a certain number of formulæ in general use with surgeons, and which, probably, have received their sanction as a body; yet it is a circumstance scarcely requiring to be pointed out, that it contains some which do not meet with general approbation, and that many more are omitted which are deemed of essential importance by the first practical men in the country.—That such is actually the fact, we shall find abundant evidence to prove, in the circumstance of every hospital or public charity having a private pharmacopœia of its own. The work now before us seems to be formed principally upon the one used at Guy's Hospital, and is not, upon the whole, undeserving the attention of the surgical practitioner. It is an useful manual of chirurgical pharmacy, and, in some respects, supplies a deficiency which an indolence on the part of the College of Surgeons appears to have too long suffered to exist. The formulæ are judiciously selected; and the remarks upon their uses are concise and pertinent; but we think the author *has* neglected to notice 'several modern applications for the cure of many important diseases in surgery,'-which (though perhaps having been considered as specifics, they may have excited the author's *aversion*,) might really be found of use, particularly as 'the influence, which many, or all such new applications, excite over the human frame, may be readily understood upon some general principle.' Thus, we conceive, that *electricity*, though not a new remedy, is a very powerful agent, in the hands of a judicious practitioner, and one which ought not to have been omitted. Its having originally been introduced as a specific for some complaints, can be no objection to its present employment under more rational principles. The same may be said with respect to other remedies, which are unnoticed by the author of the manual before us.

ART. XI. *Philosophical Transactions of the Royal Society of London, for the Year* MDCCCIX.

IN the first part of the Philosophical Transactions for the year 1809, there are several papers which will require some notice; but those to which we shall principally direct our readers' attention, are Dr. Young's inquiry into the functions of the heart and arteries, and Mr. Davy's continuation of his analytical researches.

The principal design of Dr. Young's paper is to shew, that the circulation of the blood through the arteries is but little promoted by their muscular power. He commences by the position, that 'the mechanical motions, which take place in an animal body, are regulated by the same general laws as the motions of inanimate bodies.' This he illustrates by the effect of gravity, and by the refractive power of the eye; and he concludes, that 'there is no case in which it can be proved, that animated bodies are exempted from any of the affections to which inanimate bodies are liable, except when the powers of life are capable of instituting a process, calculated to overcome those affections, by others, which are commensurate to them, and which are of a contrary tendency.' The application of this conclusion to the present subject is obvious; the motion of the blood is to be considered as that of a fluid, which obeys the laws of other fluids placed in the same circumstances; and therefore the solution of the different problems respecting the progressive motion of the blood, as depending upon the muscular or elastic powers of the arteries, becomes a question in hydraulics, to be resolved by the acknowledged laws of this science, provided only that we are able distinctly to appreciate the nature of these powers.

In the prosecution of his subject, the author proposes to himself four distinct heads of inquiry;

'1st. What would be the nature of the circulation of the blood, if the whole of the veins and arteries were invariable in their dimensions, like tubes of glass or of bone: in the second place, in what manner the pulse would be transmitted from the heart through the arteries, if

they were merely elastic tubes; and, in the third place, what actions we can with propriety attribute to the muscular coats of the arteries themselves. I shall, lastly,' he continues, 'add some observations on the disturbances of these motions, which may be supposed to occur in different kinds of inflammations and of fevers.'

The blood, while in the arteries, is subjected to a certain degree of pressure, by means of which it is forced into the veins; and it is supposed, that this pressure is almost entirely employed in overcoming the friction of the vessels. It becomes, therefore, necessary to inquire into the amount of the pressure, and the resistance which is produced by friction, or by any other cause of retardation. To ascertain these points, the author has recourse to the experiments of Hales, to the calculations of Keill and Haller, and to the theorems which he formerly deduced from his experiments on capillary tubes.

In considering the nature of the propagation of the pulse, Dr. Young observes, that the transmission of the wave of blood through the artery, is so analogous to the motion of waves on the surface of water, or to that of sound transmitted through air, that the same calculations may be employed in all these three kinds of motion. Proceeding upon his second supposition, that the coats of the arteries are perfectly elastic, he again recurs to the experiments of Hales, and deduces from them the velocity of the pulse, and the dilatation which it occasions in the vessels. It appears that the increase of size in the aorta will be about one-sixteenth of its bulk, and that the blood moves along it at the rate of fifteen and a half feet in a second. Proceeding upon these data, and also upon the principle, that the pulse must diminish in the smaller arteries in the subduplicate proportion of the increase of their joint areas, which is analogous to what takes place with respect to the decrease of the intensity of sound, it is estimated, that in very small arteries, the dilatation will not exceed the one hundred and sixtieth of their diameter, which will be a quantity too small to be observable by the human eye, even aided by the microscope. Inconsi-

derable, however, as this quantity appears, there is reason to suppose, that when the parts are in their natural state, the velocity of the pulse is greater, and the dilatation consequently less, than in the above ratio.

With respect to his third object of inquiry, the functions of the muscular coats of the arteries, Dr. Young, from considering the small amount of the dilatation of the vessels, is led to conclude, that they possess little power in the propulsion of the blood. He is farther induced to form this opinion from the great velocity of the blood; for it is obvious, that, if it be pushed forwards by the contraction of the muscular fibres, the successive contractions of the different portions must advance as rapidly as the pulse, which is the effect of the contraction. We doubt, however, whether this be any real objection; for although we may experience some difficulty in the conception of this rapidity of action, it affords no ground for supposing that there is any difficulty in the thing itself. Although, as it appears, our author supports the opinion, that the muscularity of the arteries has but little effect on the propulsion of the blood through them; yet he candidly states, that there are some facts, which may seem to lead to an opposite conclusion. There are cases on record of monstrous births, which have been produced without hearts; and in many of the lower tribes of animals, this organ is always wanting. We do not think that any objection can be fairly derived from the structure of the inferior animals; because in them the aorta performs the office of the heart; and, with respect to monstrous productions, we can scarcely argue from them to what takes place in ordinary circumstances; for we often find, that where any organ is defective, the functions of some other parts undergo a change, in order to adapt themselves to the particular circumstances of the individual. If, therefore, Dr. Young's principle be well established on other grounds, we should not think it impossible to reconcile it to any cases of unusual formation. The author conceives, that the principal use of the muscular coat of the artery is to enable the vessel to accommodate itself to the variable quantity of its contents.

Taking it for granted that the dilatation of the artery is inconsiderable, Dr. Young proceeds to inquire into the causes which produce an effect upon the state of the pulse, as felt by the finger. It must chiefly depend upon the action of the heart, and upon the tension of the vessel, owing to the quantity of blood which it contains. When the artery is much distended, and the force of the heart is great, the action of the heart will be rendered more perceptible to the touch, and a throbbing will be felt, like that in aneurism. On the contrary, when the pulse is small and feeble, it must be owing to the permanent contraction of the artery, and the weak action of the heart.

In the prosecution of his inquiry, Dr. Young has exhibited a great extent of knowledge, and very considerable ingenuity; yet we feel scarcely prepared to follow him in all his conclusions. The paper, however, deserves to be very attentively studied by the physiologist, although the result should be a partial dissent from the author's peculiar doctrines.

Mr. Davy still continues his brilliant career of discovery, by the application of the Galvanic power to the decomposition of those bodies, which were formerly thought to be elementary. His first object was to prove, in a more decisive manner than he had hitherto done, the presence of oxygen in ammonia, and thus establish a complete analogy between the volatile and the fixed alkalies. By causing potassium and ammonia to act upon each other, the ammonia disappears, hydrogen is evolved, and the potassium is converted into an olive-coloured mass, which appears to consist of this metal in union with the greatest part of the ammonia. During this process, and afterwards, while the compound is subjected to heat, both hydrogen and nitrogen are evolved, and there is a loss of hydrogen: at least, less is obtained by this means, than when ammonia is decomposed by the action of common electricity. The author proposes several conjectures for the purpose of explaining this apparent contradiction; but it appears to be a subject on which we are, at present, unable to offer any opinion, that is entirely satisfactory. The general conclusion, that may be drawn from these ex-

periments, is in favour of the presence of oxygen in ammonia; but we cannot consider the composition of this substance to be as clearly ascertained as that of the other alkalies.

The author's next experiments were on sulphur. A strong electrical power was passed through this substance, when raised to a high temperature, and a quantity of sulphurated hydrogen was procured; and the same substance was also extricated by the action of sulphur on potassium. From the phenomena which attend this process, there is reason to suppose, that oxygen is present in the sulphurated hydrogen, and that it was previously contained in the sulphur. The conclusion, that we draw from these experiments, is, that sulphur consists of a small quantity of oxygen and hydrogen, united to a quantity of some peculiar base. Analogous experiments were performed on phosphorus, and generally with the same result, although the effects were scarcely so decisive. The different carbonaceous bodies, plumbago, charcoal, and the diamond, were next examined: by heating them with potassium and observing the results, we are led to conclude, that in plumbago, the carbon exists merely in combination with iron, being itself in a state of considerable purity;—that charcoal contains a little hydrogen, and diamond probably a minute quantity of oxygen.

The three acids hitherto undecomposed, the boracic, the fluoric, and the muriatic, were each in succession made the subject of a series of experiments. The boracic acid, by being heated with potassium, seems to be decomposed; the potassium is oxidated, and a substance is mixed with it, probably of a metallic nature, which may be regarded as the basis of the boracic acid. The quantity of oxygen which enters into its composition, is probably considerable, constituting two-thirds of its whole weight. By the action of potassium on fluoric acid gas, a similar kind of decomposition appeared to be effected, although the separate existence of the fluoric basis was less obvious. The decomposition of the muriatic acid Mr. Davy has not yet been able to accomplish, in consequence of the impossibility of obtaining it

entirely deprived of water. He gives an account of some very ingenious expedients, which he practised, in order to obtain dry muriatic acid, such as forming compounds of it with sulphur and phosphorus, and subliming the compounds. His ingenuity has not, however, yet been crowned with the usual success. We may, in general, remark upon this paper, that if it appear less curious and interesting, than some of those which have preceded it, we must ascribe it to the nature of the subject, which does not admit of those striking and decisive results, which had been obtained in the former instances.

We shall briefly announce the subjects of the remaining papers in this volume. Mr. Brodie relates a case of a fœtus, that was born in a state of considerable maturity, in which the heart was entirely wanting. The absence of the heart was not the only mal-conformation; the stomach had no cardiac orifice, there was properly no colon, nor was there any omentum, liver, or gall-bladder. The umbilicus had one artery and one vein, and the artery was carried to the left groin. The only communication which existed between the arteries and the veins, was by means of the capillaries, and of course the circulation must have been entirely carried on by the arteries. We are rather surprised that the author should not have made a particular examination of the large arteries, to observe whether they exhibited any unusual degree of muscularity, or whether any part of them was dilated, so as to form a reservoir, that might, in some degree, compensate for the want of a heart.

Mr. Knight, on a former occasion, had brought forward the opinion, that the buds of trees originate from the alburnum: in the present volume he endeavours ‘ to shew, that the roots of trees are always generated by the vessels which pass from the cotyledons of the seed,’ and from the leaves, through the leaf-stalks and the bark, and that they never, under any circumstances, spring immediately from the alburnum.’ The author conceives, contrary to the common opinion, that the radicle of the seed is not the rudiment of the future root of the plant, a supposition founded upon what he

imagines to be a general law of the vegetable economy, that a proper root is always lengthened by the addition of successive portions of new matter to its apex, while, on the other hand, a shoot is enlarged by the addition of new matter within the previously organized substance. Now, it appears, that the radical grows by the latter of these processes, and, therefore, cannot be regarded as analogous to a proper root. In order to prove his position, respecting the formation of the root, the author adduces the following considerations. The proper root begins to be formed before any alburnum exists, but at a period when the cortical vessels are full of sap; the leaf-stalks of many plants can produce roots, although they are destitute of alburnum; roots are also readily formed from a shoot, the bark of which has been divided; and here it is observed, that the root proceeds from the upper lip of the wound, as if owing its existence to the obstruction which takes place to the descent of the sap through the cortical vessels. It has been imagined by some physiologists, that buds and roots were convertible into each other, from their having observed, that if a shoot be placed in the ground, a root will spring from the lower, and a bud from the upper end of it. But Mr. Knight endeavours to shew, that the different effect that takes place at the two extremities, depends upon the tendency which the vessels of the alburnum have to send their fluids upwards, while the cortical vessels permit the sap to move in the opposite direction. The author is of opinion that it is the same fluid which produces both the roots and the bulbs.

An opportunity having occurred to Mr. Home of examining the vertebræ of the squalus maximus, he discovered, that when the intervertebral substance was opened, a very considerable quantity of a mucous fluid (not less than three pints,) rushed out from a cavity, that was composed of a ligamentous and elastic substance. When the fluid was discharged, the vertebræ were brought considerably nearer to each other. Mr. Home ingeniously conjectures that this fluid, interposed between the bones of the spine, must serve an important purpose in facilitating the motions of the trunk, by serving

as a kind of fixed centre, round which the parts may turn with steadiness and velocity. Something of the same kind of structure was found in other animals, that Mr. Home examined; but the quantity of fluid was generally greater in fish than in quadrupeds, which, as the author observes, is probably contrived for producing the rapid motions of the spine, which these animals perform in swimming.

The second part of the Philosophical Transactions contains several interesting papers, of which we shall proceed to give a concise abstract.

A large fish, of the kind called by Linnæus squalus maximus, was accidentally caught near Hastings; and Mr. Home, being informed of the circumstance, took an opportunity of examining it, and especially paid attention to the peculiarities of its stomach. This organ was found to contain an immense quantity of pebbles, mixed with its natural mucus; its interior surface exhibited two different structures, one occupying the cardiac, and the other the pyloric end, the former having the honey-combed or cellular, and the latter the plicated or rugous appearance. Between the two parts, there is in this, as in all the different species of sharks, a globular cavity, with which the pyloric portion communicates by a very small orifice, and there is another orifice, nearly of the same size, between this cavity and the intestine. To the pylorus is attached the valvular intestine, the turns of which are peculiarly firm and compact; it is about four feet long, and terminates in an opening formed by the spiral convolutions of the valve, so as to present very much the appearance of a full blown rose. The author remarks, that the squalus maximus is in many respects similar to the common shark, but that in the structure of its stomach it more resembles the whale, and probably feeds on the same kind of food. It may therefore be considered as forming the intermediate link in the gradation of animals, between the whales and the cartilaginous fishes. As it is a common fish in the northern seas, and contains a large quantity of oil, it might seem at first view singular that it has not been more frequently caught by the Greenland fishers; but the circumstance is ex-

plained by attending to the nature of its respiratory organs, which, unlike those of the whale, do not render it necessary for it to come to the surface in order to breathe.

Many of our readers may recollect a marvellous account, given in the public papers, of a sea snake, that was said to have been cast on the coast of one of the Orkney Isles. A drawing of it was sent to Sir Joseph Banks, and every precaution seems to have been taken, by some gentlemen who resided near the spot, to obtain from those who saw it, as accurate a description as possible, of every circumstance attending it. It would appear, however, that it was nothing more than the skeleton of a squalus maximus; but that the lively imaginations of those who saw it, by extending its dorsal fin the whole length of the body, by twisting the lower part of the spine, by adding four additional holders to the two which this animal possesses, and by giving them a little more the appearance of legs and feet, most ingeniously metamorphosed it into a snake.

A very interesting case is related by Sir James Earle, in which a calculus was found in the bladder, larger, we apprehend, than any of which we have an equally well authenticated account. It occurred in the person of a gentleman, who many years ago received a severe blow across the loins, which produced a paralysis of the bladder and lower extremities. The bladder, after some time, recovered its action, but the motion of the limbs was ever after extremely imperfect. After a lapse of about twenty years, symptoms of calculus were experienced, and the presence of a stone was ascertained; but different circumstances conspired to prevent the performance of the operation, until, after ten years more of great suffering, the extraction was attempted by Mr. Cline. A considerable quantity of fragments was removed, but the great mass of the calculus could not be extracted, and after a few days the patient expired. Upon examination after death, the bladder was found entirely filled, and even distended by the stone; it weighed forty-four ounces, and was sixteen inches in length. It seemed to have completely occupied the cavity of the pelvis, and to have projected be-

yond, and rested upon the os pubis. The pelvis of the kidneys and the ureters were much enlarged, and the latter appear to have been the proper receptacles of the urine.

With respect to the composition of this calculus, the paper is extremely defective; we are indeed told that Dr. Powell analyzed it, and found it to consist of the triple phosphate of ammonia and magnesia, with phosphate of lime, mixed with an unusually large quantity of animal matter. But the experiments are not detailed, and therefore the whole rests upon the Dr.'s mere assertion, which, however respectable be the character of the individual, is not the kind of evidence which is admitted in foro chymiæ.

A paper by Dr. Pearson on 'expectorated matter,' although somewhat tedious, deserves to be attended to. He arranges the varieties of expectorated matter under seven different heads; the three first being merely modifications of what we usually denominate mucus; the fourth, puriform matter, secreted without any breach of surface of the bronchial membrane; the fifth consisting of a mixture of the former kinds: and the two last, proper pus, proceeding either from vomicæ, or from simple inflammation of the lungs. At present the author confines his attention to the five first species, and proceeds to describe the physical properties of these fluids. With respect to the three first species, which are mentioned as mere varieties of common mucus, although in general we should acknowledge that the description, which is given of their visible appearance and consistence, is accurate; yet we confess, that we are very doubtful, whether they are so well characterized as to form distinct varieties; and, indeed, Dr. Pearson's own experiments lead him to conclude, that they differ from each other, rather in the proportion, than in the nature of their ingredients. He has noticed one curious circumstance respecting them, that when they were examined by the microscope, 'crowds of spherical particles were seen passing to and fro, in currents not unlike those of the blood, except that they were larger.' These globules were not affected by heat, nor by several re-agents that were employed; but they were destroyed by strong sulphuric or nitric acid,

by solution in potash, or by completely charring the substance in which they are contained. The puriform fluid, which forms the fourth species, differs little in its general appearance from the common pus of abcesses, although Dr. Pearson supposes that there is some difference as well in its properties as in its origin: we should be disposed to consider it as a mixture of proper pus with the albuminous matter of mucus. It contains a very large quantity of globules 'similar to those of the blood.' There can be no doubt that a substance of this kind is expectorated in large quantities, where there is no breach of surface in the membrane of the lungs.

The author next examined the effect of caloric on these different substances. At the temperature of 150°, the albumen which they contain begins to coagulate; and at 160°, the process is completed, a curd separating from the fluid in different proportions. When the substances had been evaporated to dryness, they attracted moisture from the atmosphere, but this was not the case with the curd, when it was separated from the fluid, and dried alone. The saline substances were examined, apparently with accuracy, and were found to consist principally of muriate of soda and potash; there were also traces of phosphoric acid, of lime, sulphuric acid, magnesia, iron, and perhaps silex.

The different expectorated substances were next exposed to the action of alcohol, ether, water, and acetous acid. The experiments are very minutely, although, as it appears to us, not always very distinctly detailed, nor does there appear to be any conclusions of such importance deduced from them, as to have rendered it necessary to relate them so much at length. The chief information which we gain, is that, besides the alkaline and earthy salts, the mucus contains potash, which is not perceptible by any of the accustomed tests, and which the author supposes is neutralized by albumen, which, for what reason we know not, he calls an animal oxide. Some of the 'conclusions,' which form the last section of the paper, have been already alluded to, and we shall now notice the remainder of them. Expectorated mucus seems

to consist entirely of albumen and water, impregnated with saline and earthy salts; the proportion of the albumen varies from one tenth to one fifty-fifth of the whole, but it is generally about one twentieth. The different consistence of expectorated matter depends upon the different proportions of this substance; the thicker is the fluid, the smaller generally is the quantity of saline impregnation; all the animal fluids contain potash, and not, as has been supposed, soda, united to albumen; proper purulent matter contains much less saline impregnation than expectorated mucus. The author observes, 'that expectorated matter belongs to the class of coagulable fluids, and not gelatinizable, or, as commonly stated, mucous fluids.' The first position is correct; but certainly, unless we entirely banish the term mucous fluids from the language of physiology, there appears to be no substance to which it can apply so directly as that in question.

Before we leave this paper we must observe, that the author expressly avoids mentioning the experiments of any other chemist, who has examined the same substance; and, although this be thought impartial, we cannot entirely approve of it, as, in more instances than one, it leads Dr. Pearson to speak of facts as discovered by himself, which had before been distinctly pointed out by others.

Mr. Brande has obtained some interesting results by the application of the Galvanic influence to the animal fluids. It had been proved by Dr. Bostock, in his experiments on these bodies, that the mucous secretions contain a considerable quantity of albumen; but it was doubtful whether there was any part of them to which the term mucus could properly be applied, because those re-agents, which he had pointed out as the tests for mucus, might be supposed to act on the saline ingredients only. In order to separate these, Mr. Brande placed saline, and other similar substances, in the Galvanic circle, when he found that a coagulation of albuminous matter took place at the negative wire. Mr. Davy, to whom the fact was communicated, explained it upon the principle, that the negative wire abstracts an alkali from

the fluid, and thus permits the albumen to coagulate; and Mr. Brande, following up this hypothesis, attempts to prove, that, in all cases, the coagulation of albumen depends upon the abstraction of alkali. The facts related in this paper are important, and the hypothesis is ingenious; but we confess, that we think it requires farther proof, before it can be generally adopted.

The next paper proceeds from the pen of Mr. Home, and is entitled, 'Hints on the Subject of Animal Secretion.' The hint, although not acknowledged, seems evidently to have been taken from Mr. Brande's experiments, of which we have just given an account; and Mr. Home argues, from the change which electricity is capable of producing on the animal fluids, that it may be a principal agent in the formation of the different secretions. Besides this, which the author may probably consider as a direct evidence in favor of his opinion, he brings forwards some considerations, which shew the inadequacy of the common opinion to account for the facts. We must confess, that we did not expect, that a writer of Mr. Home's celebrity would have brought forward so crude an opinion, or that the learned body, to whom it was communicated, would have thought it worthy of being inserted among their transactions. Notwithstanding, however, the unfavorable opinion which we express of Mr. Home's paper, we think that the 'hints' ought not to be neglected, and we hope that in his, or some other hands, they may lead to some curious and important conclusions.

We are always pleased to meet with the productions of Mr. Knight's pen; for we are certain to obtain valuable information, conveyed in an unassuming style, without any undue affectation of science, or any encroachment upon the discoveries of his fellow-labourers. In a letter, which is inserted in this volume, he makes some curious observations, 'on the comparative influence of male and female parents on their offspring.' His opinion is, that the female character is much more conspicuous than that of the male, and he builds it on the result of some experiments, in which he has lately been engaged, on the production of new varieties of

the apple. Mr. Cline had recommended in the breeding of cattle, that large females should be employed, upon the principle, that the size of the fœtus is chiefly regulated by that of the mother. The principle is probably correct; but Mr. Knight, from his own experience, disapproves of the practice, because, when a large female is made use of, although the limbs of the offspring may be of greater size, yet, with respect to the purposes of utility, an animal is to be preferred which has small limbs, with a proportionably large quantity of muscle. The author supposes, that the female is principally concerned in determining the sex of the offspring, because he has noticed among cattle, that particular females are found to produce a much greater quantity of one sex than other females, although they have both been impregnated by the same male. On the contrary, he has never been able to observe, in the offspring of an individual male, any considerable difference in the number of the two sexes that is produced.

In our last volume, we gave a short abstract of a paper of Messrs. Allen and Pepys on respiration, and we have much pleasure in being able to announce a continuation of their labours. They observe, that one of the most remarkable of their former results was the fact, that after the respiration of pure oxygen, a considerable quantity of azote seemed to be discharged from the lungs, more than could be accounted for by the air remaining in them at the commencement of the experiment; and it farther appeared, that this azote was given out in greater proportion in the early part of the process. The experiment was very accurately repeated; 2668 cubic inches of oxygen were respired for 13 minutes, and portions of the gas were removed at different periods for examination. The air was found to be diminished in bulk by 124 cubic inches; and, upon analyzing the different portions, it was found that all of them had gained 10 per cent of carbonic acid; that all of them had lost oxygen, and acquired azote; but the loss of the first, and the gain of the second of these bodies, were in greater proportion in the earlier, than in the later stages of the experiment. The whole quantity of

azote produced, was 105 cubic inches, and, during the first half of the experiment, its production, in equal times, was nearly in the ratio of the numbers $41\frac{1}{2}$, $20\frac{1}{2}$, $12\frac{1}{2}$, 10, and 7. Here the question occurs, Whether this azote be derived from a quantity of it, which existed in the lungs at the commencement of the experiment, or whether a portion of the oxygen be converted into, or be replaced by, an equal bulk of azote? In order to determine this point, the authors thought it necessary to reconsider the estimate, that had been formed, of the capacity of the lungs after a complete expiration. It was found, agreeably to our former experience upon the subject, that by no method, but that of cutting the lungs into small pieces, and squeezing them by a powerful press, could all the air be expelled from them. They were then found to be nearly of the same specific gravity with water; and, by an easy calculation, the contents of the lungs, which they examined, appeared to be 1018 cubic inches, a number which remarkably coincides with that proposed by Dr. Goodwyn. The authors remark, after this experiment, 'we are thus almost compelled to allow, that, when pure oxygen is respired, a portion of azote is given off by the blood.' This conclusion, which appears to be warranted by the present state of the facts, we conceive affords a pretty strong presumption in favour of that theory of respiration, which supposes that oxygen is actually absorbed by the blood in the lungs. A series of experiments were then entered upon with Guinea pigs; and, first, the animal was confined in a quantity of atmospheric air. The bulk of the air was not affected, nor did the quantity of azote appear to be altered, but part of the oxygen was converted into carbonic acid; the result corresponds with what takes place in the human subject. The animal was afterwards placed in oxygen gas; 1000 cubic inches were employed, they were diminished in quantity by 4 cubic inches, 106 inches of carbonic acid were formed, 54 of oxygen were deficient, and 50 of azote were added. This experiment, therefore, agreed with the corresponding one on the respiration of man, but with this additional circumstance, that the quantity of azote produced is consider-

ably greater than the whole bulk of the animal, which appears to have been no more than 39 cubic inches. The authors observe upon these experiments;

'It seemed that, when the usual proportion of azote was not present in the gas respired, there was a disposition in the blood to give out a certain quantity in exchange for an equal volume of oxygen; and we resolved to try, whether this circumstance would occur when hydrogen was substituted for azote: we accordingly made a mixture, containing 22 parts oxygen and 78 hydrogen.'

This mixture was employed; the animal did not appear to suffer any uneasiness, although the experiment continued for an hour; but, towards the conclusion, it became drowsy. It was found, upon examination, that all the hydrogen was consumed, and that there was an increase of azote, in the same manner as when pure oxygen is employed. The authors conclude their paper with a summary of the facts that may be deduced from their experiments. This, however, we think it unnecessary to quote, as we have already stated them in the course of our abstract.

In our account of Mr. Davy's experiments on the decomposition of the alkalies, we stated his conclusion, that ammonia, as well as potash and soda, is an oxide, and, like them, contains a metallic basis. Dr. Henry, whose skill as an experimentalist is so well known, has however been induced to form a contrary opinion: he conceives that, when ammonia is decomposed by electricity, no oxygen is procured, and that the small portion, which has been observed in this process, depended upon a little atmospheric air, which insinuated itself into the apparatus. He then instituted a process, for ascertaining whether any water is generated by the decomposition of ammonia; but here again it seemed, that by employing the necessary precautions for bringing the gas to a state of perfect dryness, no water was perceptible. Dr. Henry confirms the fact, which had been before mentioned by Berthollet, that, in the decomposition of ammonia by electricity, the bulk of the gas is nearly doubled; and he agrees with Mr. Davy in his estimate of the proportion of hydrogen and azote, generated in the process. He then

goes on to describe the method, which he has lately discovered, of analyzing ammonia, by firing it with oxygen; a method which is much more commodious than any that has been hitherto adopted. Ammonia is also capable of entering into combustion with nitrous gas.

The volume concludes with a paper of Mr. Davy's, which is denominated an Appendix to the Bakerian Lecture. In our review of the lecture, we mentioned the results that were obtained by subjecting ammonia to the action of potassium, and the difficulty that there was in reconciling them to other well established chemical facts. Mr. Davy has been assiduously labouring to clear up the difficulty, but, as it would seem, without success; so that this point still remains to be farther investigated. He has performed some additional experiments on sulphur, and the other combustible substances, which still more confirm his former conclusions respecting their compound nature.

ART. XII. *A Treatise on the Diseases and Management of Sheep; with introductory Remarks on their Anatomical Structure; and an Appendix, containing Documents exhibiting the Value of the Merino Breed of Sheep, and their Progress in Scotland.* By Sir George Steuart Mackenzie, Bart. 8vo. pp. 180. Constable and Co. Printed at Edinburgh.

IF the Swedish proverb be true, that 'sheep have golden feet, and wherever the print of them appears, the soil is turned into gold;' every publication, which throws light on the cure of the numerous diseases to which they are liable, deserves encouragement. The treatise now before us is very unassuming in its pretensions; and is given to the public, by its author, only as an introduction to a more extensive work, which, however, he does not consider himself qualified to undertake.

There have been published, within these few years, several treatises on the diseases of sheep; but this of Sir George Mackenzie's is, we believe, the only one, in which the nature and cure of these diseases are illustrated by a clear and fa-

miliar view of the anatomy of that animal. For this part of his subject, our author acknowledges his obligations to Mr. James Wardrop; and while his name can leave no doubt that it is accurate, we can, at the same time, assure our agricultural readers, that, with very little labour or difficulty, the explanations that are given, illustrated as they are by accurate engravings, may be completely understood.

The second part of this treatise relates to wounds, &c. which are considered under the heads of simple incised wounds ;—punctured wounds ;—lacerated and contused wounds ;—wounds of the joints ;—and poisoned wounds ;—sprains ;—fractures ;—the operation of bleeding ;—the operation of castration ;—and the operation for *sturdy*, or water in the head, are also considered in this division of the work.

The observations and advice are, in general, extremely judicious, and evidently result from a practical knowledge of the subject:—on two points only shall we offer a few remarks.

In the section on Castration, our author takes no notice of what, in Norfolk, and some other of the eastern counties of England, are called '*ridgil*' lambs; i. e. lambs, one of whose testicles is concealed. These animals, if they are suffered to remain uncastrated, become very troublesome and mischievous; while the operation of castrating them is so difficult and dangerous, that but few shepherds are capable of performing it. The difficulty and danger are greatly increased, when the concealed testicle happens to be very small, and to lie close to the vertebræ. In every case of 'ridgil' lambs, the operation ought to be trusted only to such shepherds, as have been long accustomed to perform upon them, or to such as have an accurate knowledge of the anatomy of the parts. The mode, that is followed in Norfolk, is particularly described by Mr. Marshall, in his ninety-second minute on that county.

Sir G. Mackenzie notices Mr. Hogg's method of curing the Sturdy, or water in the head, by thrusting a knitting needle up the animal's nose, and forcing it through the skull into the brain. The objections to this mode are not only, that it is a desperate remedy, and, without the greatest care,

and some skill, must prove fatal; but also, that, when it succeeds, the cure in most cases will only be temporary. A similar method has been followed in Kent: but the water, though let out, collected again in a short time, and destroyed the Sheep.

In recommending mercurial ointment for the Scab, or Itch, our author should have put in a caution against using it, either in the winter, or in the beginning of spring. It has been uniformly found, by those farmers who have used it, that it is highly injurious to the sheep, if applied before the middle of April, or after the end of September. It is a common opinion in some parts of England, that sheep which are folded, are more liable to the scab than others: this, however, is certainly a mistake, arising from the scab spreading more rapidly and generally, when the sheep are confined in the fold.

Little can be added to the account of the 'foot-rot,' which our author has transcribed from Mr. Pictet. It is undoubtedly infectious; and the infection is spread not by the sheep coming in contact with one another, but by their following always in one track; so that the purulent matter left on the grass affects the feet of those that are sound.

We are surprised that Sir George, in the Section on the 'Rot,' does not make use of the information which Dr. Harrison has given to the world on that subject; as it would have rendered this part of his work much more complete and satisfactory.—Mr. Hogg's notice, that the rot is occasioned by a sudden fall in condition, was hardly worth noticing, it is so manifestly contrary to the fact.—It is well known that sheep often die of the rot, when they are very fat; and the farmers in Dauphiné maintain, that, if they are fed in the dew, they will quickly fatten, but, if not immediately killed, will become rotten and die. The common remedy for this disease in France is salt; 3lb being allowed daily to 40 sheep. In the first stage, turpentine has been given with good effect; in the last stage, mercury, as our author suggests, would probably be beneficial. This disease seldom, if ever, attacks sheep, that feed on chalk-hills, limestone, or salt-marshes: on low, wet pastures they

are very liable to it. That they should escape, and even be cured, when fed on salt-marshes, can be attributed only to the peculiar grasses, which grow there, or the saline particles with which the pasture is covered. Experiments are much wanted to ascertain the effects of different grasses on the health of sheep, and to determine whether the disorders to which they are liable, when pastured on low wet grounds, arise entirely from the nature of the ground, or from the qualities of the grasses, which grow in such a situation. The *crowsfoot*, which abounds in moist soils, is supposed by many farmers to occasion the rot. We have already mentioned, that in some parts of England, folding is supposed to give rise to the scab: in Gloucestershire, folding is looked upon as the cause of the rot;—a mistaken notion, arising from the circumstance of the folds being placed in the vale, or moist lands; and the sheep, when not folded, pasturing on the high and dry lands.

The following are some of the diseases of sheep not noticed by our author.

1. The 'Goggles.' This disorder prevails on the confines of Somerset and Dorset:—the sheep, that is attacked by it, at first discovers great difficulty in raising its hind-quarters; and frequently turns its head towards the part affected. In a short time the fore-quarters also are attacked; and the animal, after lying motionless, expires.—The symptoms, by which the approach of this disorder is indicated, have not been attended to; and after the attack has actually commenced, no effectual remedy can be applied.

2. Among wether lambs a disease is not uncommon, the first stage of which consists of a swelling near the loins;—strangury succeeds; and the animal, if not speedily relieved, is carried off by a rupture of the bladder, or an absorption of urine. The simple and obvious remedy is to let off the urine, as soon as the swelling near the loins is perceived.

3. Sheep, as well as black cattle, are liable to be 'blown' with clover: probably they might be relieved in this case by the use of the same instrument, which has been invented for the relief of cattle. The South Down shepherds give half a pint of linseed oil to each sheep, that happens to be 'blown.'

In some parts of France, oak-bark, mixt with moist bran, is given for this disorder.

4. Lambs, while sucking, are frequently troubled with sore mouths: the application of the lancet to the gums has been suggested in this case, and would in all probability prove effectual.

The fourth and last part of this treatise relates to the management of sheep, and comprises observations on shelter from drifting snow, rain, heat, and flies;—food;—smearing or salving;—washing;—shearing;—yolk of wool;—putting rams to ewes;—great ewes;—lambs;—weaning lambs;—vermin of lambs;—and salt.

The circular enclosures mentioned by Mr. Hogg, and recommended by Sir G. Mackenzie, may do very well on land constantly in pasture; but they are inapplicable to turnip-fields, where it is often necessary and desirable to shelter sheep, and especially lambs, from the inclemency of the weather. In some parts of Surrey, the hurdles, of which the folds are composed, are used for this purpose: the wattles are interlaced with straw, so as to be impervious to the rain or snow; and the hurdles so prepared are formed into a kind of shed, under which the sheep and lambs are driven. This contrivance has several recommendations:—it is cheap, easily and soon made;—and it can be removed, without much trouble or difficulty, from one part of the turnip field to another, as the quarter from which the wind blows, or other circumstances, may require.

We could have wished, that Sir George had examined more fully and strictly the question respecting the necessity or advantage of smearing or salving. It is not known to the south of Yorkshire, and but partially to the north of the Forth. It is a very troublesome and tedious operation; and though it undoubtedly is calculated to cheat the wool-merchant, by increasing the weight of the fleece, yet it may fairly be questioned, whether it improves the quality of the wool, or benefits the health of the sheep. If it must be used, the composition recommended by Sir G. Mackenzie, (viz. a composition of train oil, tar, and butter or hogs-lard,) is much preferable to that generally employed.

The Appendix contains several papers on the Merino Breed; all of which, we believe, have been published before, except two letters to our author, from Sir James Montgomery, and General Robertson of Lude, which contain very satisfactory information respecting the progress of that breed upon the respective estates of these gentlemen. Indeed, we believe it is now universally admitted, that the Merino sheep will, under proper management, thrive as well, and bear wool nearly as good in quality and as abundant, as in their native country. The principal objection to them, is that their carcase is inferior to that of the South Down and other British breeds: but, by judicious crossing, and the selection, for breeding, of such only as possess in the highest degree the fine and abundant wool of the Merino, with the form of the best shaped British sheep, this objection will soon be removed.

ART. XIII. *A complete Treatise on Farriery: comprising the Transactions, or modern Practice, of the Veterinary Art; exhibiting the true Characters, Causes, Symptoms, Prognostics, and improved Methods of treating, the Diseases of Animals, including those of Horses, Cows, Sheep, Pigs, Dogs, &c. Intended as a Compendium to the young Veterinary Surgeon, Farrier, Groom, Farmer, Grazier, &c. Forming a new and Practical Nosology of all the Diseases of domestic Animals.* By J. Feron, Veterinary Surgeon, Twelfth Light Dragoons. Royal 8vo. pp. 496. Stockdale.

ART. XIV. *The Gentleman's Veterinary Monitor, and Stable Guide; a concise Treatise on the various Diseases of Horses, their Symptoms, and most humane Methods of Cure: calculated to enable Persons to form an accurate Judgment of the Diseases of their own Horses, and apply proper Remedies, without the Assistance of a Farrier. With useful Observations on the Breeding and Training of Colts; Hints to the Purchasers of Horses; general Directions for riding and using a*

Horse on a Journey; Stable Management, &c. By Yorick Wilson, Veterinary Surgeon, Lemington, near Warwick. 12mo. pp. 123. Bone and Hone.

THE first of these articles is a very handsome volume, vamped up in the true book-making style, and may be purchased for the moderate sum of one guinea.

We will give one specimen of the author's manner of writing, spelling, and reasoning; and will assure our readers, that, if they approve of this, they will not be disappointed when they purchase the book itself. Under the head 'PHYSICING!' we are told, that

'The *physicing* of horses is so sufficiently understood, even by the most illiterate farriers and others, as to require no description. I therefore shall limit myself to the following observations: The first of which will be, that more valuable horses have been lost by improper courses of physic, than from any *other accidental cause:* if this be true, it will evince the absurdity of purging horses in every disease, as is too frequently done. Since I must be allowed to say, that the discrimination and judgment of a good veterinary surgeon can alone determine when purgatives are requisite; and when, on the contrary, they are likely to be injurious. But, as such a discrimination is not easily understood by many practitioners, I will here introduce a short anatomical description of the stomach and intestines of the horse.' p. 311, 312.

Then follows a description, not of the stomach as proposed, but of the intestines, with some loosely detailed facts respecting their peculiarity of structure, which, if properly described, might prove interesting as matters of anatomical research: but, as stated by Mr. Feron, they do not explain any thing which precedes or follows, at all connected with the operation of the physic, unless it be, that the colon is in one place very narrow, and consequently liable to inflammation from the stimulant effects of strong purgatives.

We cannot conscientiously fatigue our readers, by dwelling upon this gentleman's performance. If he had condensed his matter within half its present compass, we could have said more in its favour, because we think that the work may

contain some useful information which is now difficult to be discovered. The style is diffuse, irregular, and coarse. The author talks with much contempt of illiterate farriers, while he uses such phrases, as 'every sinuses were,' and such words as 'vert*i*bræ,' '*th*rocar,' 'car*i*e,' &c. His explanation of mortification, however, is too curious to be passed over; and our readers may be more fortunate in ascertaining the import of the following sentences, than we were.

'The *immediate cause* of mortification, is the reduction of the vital heat in the part to a certain degree below that which health requires. The *immediate causes* are, violent inflammation, which, by the heat attending, so distends the cellular membrane, as to *compress* the vessels, stop the circulation in the adjacent parts, and destroy the vital action there. The acrimony of the *juices*, by rupturing the vessels in an inflamed part, occasions an extravasation of blood, which putrifying, produces a mortification.' p. 288.

After closing the above ponderous tome, we took up Mr. Wilson's little treatise with considerable relief. Whether he has assumed the name of Yorick we know not; but he has certainly great pretensions to the character of a facetious writer, and is influenced to address the public by the best of motives.

'Having,' says he, 'endeavoured to avoid as much [as] possible the usual technical and nonsensical jargon, by which so many of my predecessors have taken pains to bewilder their readers, I think I have secured a *niche* to myself; being the first who has attempted a work on Veterinary Medicine *upon those principles*.' p. vi.

The author then, no doubt very sincerely, expresses a hope, that, as his treatise was written to aid the reformation of farriery, it will become 'a book of constant reference to all who are concerned with horses,' and 'that this little book may constitute part of the library of every gentleman, as an useful monitor.' Our suspicions that Yorick might have been an assumed name, were occasioned by some pathetic reflections of our author, on the use of the whip. He thus, for instance, apostrophizes an obstinate brute of a groom,

who was whipping a horse, 'to collect his scattered spirits together, in case a purchaser should drop in.'

"A fig for the humanity of the world!" said I; "and is it thus every poor devil of a horse, that unfortunately falls into thy hands, is to be whipped out of his skin, merely for the sake of thy advantage?" 'Upon which he left the stable. The horse looked behind him the moment he heard his master quit the stable. On walking up, in order to cherish him, I (Yorick) observed the tears rolling down his face; which operated so strongly on my affections, that I declared I would never more see an animal beaten unjustly, without punishing the offender.' p. 3.

After this effusion of humanity, it would be cruel in us to exercise our lash on Mr. Yorick Wilson; we shall therefore soothe him with as much praise as is consistent with our duty. His hints to purchasers of horses, if not very profound, are at least sensible, and will at once be assented to by the meanest capacity: perhaps the most important of these injunctions is, to consider, before we purchase a horse, for what occupation we design him. Some of our readers, however, may think the following hint still more valuable: 'Having seen the different paces of the horse, and formed a good opinion of him, it will not be unreasonable to request, particularly if you are the least known to the dealer of whom you are about to purchase, that you may be permitted to ride him a mile or two.' Then follow directions for breeding, training, riding, using a horse on a journey, stable-management, &c. which we think may prove useful to such persons as require to be told, that 'the stirrups should neither be too long nor too short;' that when a horse is brought out of the stable they should examine the girths, stirrup leathers, &c.: this being done,

'If all is right, make the horse stand firm and *immoveable* till you are properly seated, and have adjusted your dress. When you would have your horse go forward, do not let him feel whip or spur immediately, but convey your meaning to him by some kind of signal,' &c. p. 26.

As the author has the rare merit of compressing his observations on the 'various diseases of horses, their symptoms,

and most humane methods of cure,' within the space of about eighty extremely small pages, we shall say no more than that, if his purchasers can ascertain the name of their horses' complaint, they will find a suitable remedy for it in this book.

ART. XV. *Hints respecting the Construction, and some Uses to which Bags capable of confining Atmospheric Air may be applied; submitted to the Consideration of the Public.* By John Addie, M. D. Stockton-upon-Tees. 8vo. pp. 17. Printed at Stockton.

NATURE certainly never intended Dr. Addie for a physician at Stockton-upon-Tees, but for a professor in the celebrated Academy of Lagado. With this pamphlet in his hand, he might confidently venture to offer himself as a candidate there; and if similarity of talents and views decided the election, he would undoubtedly be chosen.—Let our readers judge.

He proposes that air-beds, or, in other words, bags filled with air, should be furnished to the soldiers. Reposing on these, our troops would be preserved from the damp, and kept in a moderate and equal temperature. During a march, the bags, rolled up, might be easily carried on their backs; and at night, each soldier might speedily make his bed, by applying a common pair of bellows to its 'wind-pipe, or air-tube.' So enraptured is our author at the thought of the benefit which the soldier would derive from his invention, that he actually becomes poetic.

'Instead of rising,' says he, 'from the cold damp earth, with dejected countenance, and benumbed or aching limbs; I see him start from his bed, with glowing cheek and elastic frame, rejoicing in his renovated strength—his song is the deeds of heroes, his heart beats high for battle.' p. 9.

His imagination, now having got fairly warmed, presents to his view other uses of this air-bed, and transforms it into

a military hospital-bed, the advantages of which will be so great, that, in Dr. Addie's opinion, 'every person who has the least drop of the milk of human-kindness in his bosom,' will estimate his contrivance very highly. This contrivance is then transformed into a bed for lying-in-hospitals:—in the next paragraph it presents itself, filled with air or water warmed 'to 94°, 96°, or 98° of Fahrenheit's thermometer,' as a bed for the Humane Society, 'in the restoration of suspended animation.' Touched by harlequin's wand, it again changes its form and application, and successively offers itself to our wondering and astonished eyes as a hammock for the sailor, and a float, on which he might escape 'with provisions necessary for several days,' when threatened with shipwreck. In this last form, our author seems to think it might be serviceable, even when the life-boat could not be used!

A man of a moderate appetite for scheming would have been amply satisfied with these projects:—not so Dr. Addie. The hammock and float disappear, and, in their place, he presents to our view, a whole army crossing broad and deep rivers upon the air-beds, and 'thus quickly escaping a victorious or powerful foe, or attacking that foe suddenly when off his guard.' Again the scene changes, and 'an army in battle array' are seen lying down in these beds. Here, as there would be 'no tents to conceal sculkers,' the officers might easily see, who were at their post, or who had deserted it. Each air-bed is to have a coverlet—but not a common, every-day coverlet: no, the coverlet must be worthy of the bed, and therefore capable of undergoing as many transformations, and being applied to as many uses. He is even so attentive to the comfort of the soldier, as to offer a plan for warming his air-bed 'in the midst of a wilderness.' Lastly, he touches on the materials of which the body and air-tube of the field-bed may be made; and, though he does not spend half a dozen lines on this part of his subject, parchment, undressed skins, leather, the intestines of whales, and the bowels of smaller animals, are all suggested.——When the reader is informed, that all these contrivances, and others

that we have not noticed, equally solid and practicable, are detailed in the short compass of one sheet, very loosely printed, and are the result of only a few hours' attention accidentally turned to them, what may we not expect if our author should devote years and volumes to a subject, in which he is already so adroit?

We do not pretend to any great skill or experience in scheming; but we shall, with all due deference and submission to Dr. Addie's superior talents in this art, suggest two applications of his air-bags, which offered themselves to our minds, during a day-dream into which we were insensibly thrown by the perusal of this pamphlet.

The great objections to our military expeditions are, that they very seldom succeed, and that they are always attended with great expense. Now, if Dr. Addie's air-beds were made of silk, *might they not* (to adopt his modest and diffident interrogative) be used as balloons as well as beds? Thus the expense and uncertainty of transports, and the fatigue of a long march, would be avoided:—for instance, a project seems to have been entertained of taking Antwerp by a *coup-de-main*. This project might have been carried into complete and successful execution, if our army, mounted on their beds, filled with rarified air, and taking advantage of a strong westerly wind, had crossed the channel, and pounced, all at once, upon the exposed and unsuspecting city of Antwerp. We are sensible, that we cannot lay claim to much originality in this project: but it is tolerably good for beginners, and it led the way to the following, which, if our vanity and self-love do not deceive us, is superior even to any of Dr. Addie's schemes.

The business of soldiers, all the world knows, is to destroy life; and that, too, most frequently without benefiting or enriching their country. The object of our scheme is to reverse their character and occupation, and to make them preserve life. It has lately been proposed to bring the mild and salubrious air of more favoured climates to the weak and sickly, instead of sending them to it. Now, let our army, whenever it is about to leave a mild and salubrious country,

(Lord Wellington's army, for instance, before it embarks from Lisbon,) fill these proposed beds of Dr. Addie with air, and let this air be sold, at so much the dose, to those in Great Britain, who cannot afford, or have not an opportunity to go to it. Thus, while our soldiers kill their enemies, they will preserve the lives of their countrymen, and greatly enrich their country.

ART. XVI. *A System of Dissections, explaining the Anatomy of the Human Body, with the Manner of displaying the Parts, the [of] distinguishing the Natural from the Diseased Appearances; and pointing out to the Student the Objects most worthy of Attention, during a Course of Dissections.* By Charles Bell. Third Edition. 2 vols. 8vo.

IN studying anatomy, as well as every other department of medicine, or of science in general, we naturally prefer that order of investigation, which shall enable us to obtain, in the shortest period, a perfect knowledge of the subject of our inquiry.

Every one, who has employed but the smallest portion of his time in the actual dissection of any part of the body, must have been convinced, that, without a similar mode of studying all its parts, accurate ideas of their structure cannot be acquired. Experience, we believe, however, will also shew, that a knowledge of anatomy is not obtained, most speedily, by dissection alone. This practical employment ought to be preceded by a careful study of the various textures and organs of the body, and of their functions, as they are exhibited and described in lectures and elementary books on Anatomy. The student need then employ only a comparatively short period in dissection, to confirm or correct his ideas of the structure of particular parts, and to impress more strongly on his memory the facts which have been established respecting their vital action.

If, in commencing a course of dissections, the student is desirous of bringing the various parts of the body into view,

exactly in the same order as they are described in general systems of anatomy, it is obvious, that he can consult no better authorities, during his labour, than these elementary works. But this systematic method of dissection seems to possess no advantages, sufficient to counterbalance the great loss of time, which it necessarily occasions. Having once obtained a general knowledge of the structure of the body, it is far preferable, in dissecting its different regions, to proceed regularly, 'a capite ad calcem;' and to examine, at one and the same time, the relative position and the structure of all the textures and organs contained in each region. In executing this plan, no small assistance may be derived from consulting any anatomical treatise, which, while it refers to the common elementary books, for every thing which relates to the minute structure of organs, enumerates the various parts which successively present themselves to the eye of the dissector in each region; points out the most eligible mode of exposing them fully to view; describes their connexions in clear and concise language; and adds such practical reflections, applicable either to surgery or medicine, as the study of their relative position is calculated most naturally to suggest. Such a treatise is usually entitled a *System* of *Dissections.*

Anatomists are sufficiently well acquainted with the folio work, published under this name, several years ago, by Mr. Charles Bell. It is unnecessary for us now to detail its contents, or to criticise them at any length; we shall content ourselves merely with observing, that it is a work, which we have always regarded as objectionable in its plan, and no less so on account of the manner in which it is executed: the tedious remarks on morbid structure, which form so large a proportion of the book, and many even of the disquisitions on healthy action, appear to us entirely misplaced. The descriptions have seldom either neatness or precision, and their place is often altogether supplied by a trifling *verbiage.* Owing probably to faults such as these, or to its inconvenient and expensive form, or, as we rather suspect, to both of these causes conjoined, Mr. Bell's book has been altogether sup-

planted in the dissecting room, by a work of much more modest pretensions both in matter and magnitude, *The London Dissector*. Though we cannot commend this little compilation very highly, either on account of judicious arrangement, or accuracy of description, yet we think, that it very well merits the success which it has met with; because it is the best of its kind which we possess. Mr. Bell, however, is disposed to ascribe its favourable reception with the public, to 'its author having incorporated into it much of what is peculiar to his work.' He has therefore 'thought it right' to reduce his 'system of dissections' from its original folio size, and to print it in its present more portable form.

Mr. Bell leads us in his preface to expect, that this change of *volume* has been accompanied also with a change of *quality*. But though several trivial alterations in the work are obvious, we have been able to perceive but little amendment either in the plan or the execution.* The First Part contains the Dissection of the Abdomen. At page 15 of this section, Mr. B. has ventured on a description of the internal orifice of the inguinal ring. It is too long for quotation; yet we recommend it particularly to the perusal of our readers, as forming a striking contrast to the minute accuracy with which this region has been delineated by Burns, Cooper, and Lawrence. Judging, however, from the language in which this description is introduced, Mr. Bell appreciates it much more highly than we do.

'Now,' says he, 'I have a circumstance of the anatomy to point out, of much importance. I am *going* to object to Mr. Cooper's *history* of the internal ring. The *subject* is before us! I cannot misrepresent, though I may misinterpret. Let the profession determine whether I do this in enmity to one, who most liberally bestows his praise on others, or from that commendable spirit of investigation which it is my duty to recommend and enforce with my pupils.'

In the same tone of confidence and authority, a tone which few of our profession, we believe, have yet ventured to as-

* There is still room for correction, even in the title-page.

sume, except Mr. Bell and his brother, is the remark on the femoral ligament at p. 17.

'In endeavouring to push his finger up into the belly, by the inside of the vessels of the thigh, he (the dissector) feels the sharp edge of a ligament; when he pushes his finger deep, and again withdraws it, the circular edge of this ligament can be seen. I have for several years demonstrated this, as the part strangulating in crural hernia: such of my pupils, as belong also to the borough school, insist upon *something more*. If there be, I stand corrected; but if *this* be claimed as a discovery by any man, *I pointedly object to it*. The ground for drawing my pupils' attention to *this* has been *this*,' &c.

The remaining parts describe, in succession, the dissections of the brain, thorax, pelvis, face, neck, and extremities. To the end of the second volume is added one appendix, consisting of short descriptions of the muscles, as they present themselves in the order of dissection; and another, containing a classification of the arteries.

If, in publishing his 'System of Dissections' in its present form, Mr. B. has looked forward to its exclusive adoption in the anatomical theatre, we should fear that his expectations may be disappointed. 'The London Dissector' is still a formidable rival.

ART. XVII. *The Anatomist's Vade Mecum; containing the Anatomy, Physiology, Morbid Appearances, &c. of the Human Body, the Art of making Anatomical Preparations, &c. To which are added, Anatomical, Physiological, Medical, and Surgical Questions for Students.* The Eighth Edition, very materially improved. By Robert Hooper, M. D. of the University of Oxford, and the Royal College of Physicians in London; Fellow of the Linnæan Society; Physician to the St. Mary-le-bone Infirmary; Lecturer on Medicine in London. 12mo. pp. 416. Murray.

WE have looked through this eighth edition, and found it upon the whole considerably improved. It is still, however, sufficiently obscure in many places, to oblige the student to

have recourse to a practical pursuit of anatomical knowledge, before he can even presume to pass 'his examination at Surgeons' Hall;' a deficiency, which, upon consideration, we cannot help thinking its greatest perfection; and we are therefore not so anxious, as we otherwise might be, to see it corrected, either in the present, or any future edition.

We have already had frequent occasion to express our disapprobation of this class of books, compiled for the purpose of enabling the idle student or uneducated practitioner to carry, in his *pocket*, that which industry and observation ought to have impressed upon his mind. We trust, however, that remarks upon this subject will not be often called for in future; as the Midwife's Vade Mecum is almost the only one, that remains for the talents of Dr. Hooper to produce. With respect to the Anatomist's Vade Mecum, we may observe, that in all the anatomical schools, for which this metropolis has long been so eminently conspicuous, there is a lecturer, a demonstrator, and generally a sufficiency of senior pupils, who are both willing and able to assist the uninitiated, in the dissecting room. The utility of such a performance in this point of view, is, therefore, in our minds very doubtful; and were such assistance, as it may be able to afford, even necessary, from a want of the above circumstances, we should still deem the form, which our author has chosen, exceptionable. As to the 'anatomical, physiological, surgical, and medical questions, to be learnt by every student, previous to his examination at Surgeons' Hall, the Medical Board,' &c. they are really too absurd for criticism: many of them are so ridiculous, (as, for example, '*How many arteries are there?*') that we imagine our public examiners will not feel themselves much complimented, in being supposed capable of putting them to the young candidates for professional advancement, who may come before them.

ART. XVIII. *A System of Chemistry.* By J. Murray, Lecturer on Chemistry, and on the Materia Medica and Pharmacy. Second Edition. 4 Vols. 8vo. pp. 2894. Longman and Co. Printed at Edinburgh.

ALTHOUGH no long time has elapsed since the publication of Mr. Murray's System of Chemistry, yet the discoveries that have been made, and the new hypotheses that have been formed, are so numerous, as not only to render it necessary for the author to introduce a considerable quantity of additional matter into this new edition, but likewise to induce him to make a good deal of alteration in the arrangement of his materials. It is indeed obvious, that a work like the one now before us, the professed object of which is to give an abstract of the present state of chemical knowledge, must experience perpetual changes, and this not merely depending upon the development of new facts, but also upon the inferences that we draw from them. Notwithstanding, it may be admitted as a general truth, that chemistry is an experimental science, and that it consists either of particular facts, or of positions immediately deduced from them; yet we shall find, upon examination, that no inconsiderable share of our supposed knowledge of the laws of chemistry, and almost the whole of that upon which we found our arrangements, depends, in a great measure, upon hypothetical inferences. We may farther remark, that at present it is quite impossible to prevent this from taking place, and that the attempt to exclude hypothesis, would be at once to throw a powerful obstacle in the way of future improvements. It is, indeed, very necessary that we should theorize with caution, and especially, that we should discriminate between those points that are directly deduced from experiments, and those which are only remotely inferred from them, by the introduction of a train of reasoning. From a want of this kind of discrimination have proceeded most of the errors which have retarded the progress of chemistry, as well as all the other branches of natural philosophy; but it would be impossible

to pursue the science with any advantage, were we prohibited from generalizing individual facts, or from predicting the result of unknown combinations, in consequence of comparing them with such as had actually fallen under our inspection.

Mr. Murray, in the former edition of his work, proceeded upon a principle which seems plausible, and which would probably occur to every one, as the natural method of developing chemical truths, that of beginning with an account of the elementary substances, then going on to describe the bodies that are formed by the more simple combinations of elements, and, lastly, proceeding to those that are more compounded. Provided we could be certain what bodies are elementary, and that we were able to obtain the elements in their simple state and ascertain their properties, this method would possess decided advantages; but the state of the science does not admit of this simplification, and it is doubtful whether it ever will do so. The assumption, that such and such bodies are elements, is, indeed, little more than an appeal to our ignorance; it is only saying that we are unable to decompose them; a circumstance which it is as probable may be attributed to the inefficiency of our art, as to the real constitution of the bodies in question. Aware of these difficulties, and having, indeed, learned from the experience of the last three years, that chemical theory was likely to undergo a revolution almost as important as that which was effected by the discovery of the gases, Mr. Murray determined to reverse the order of his arrangement; and, instead of proceeding from elements to their compounds, he now commences with the description of bodies as they actually exist: and having determined their properties, he then inquires into their composition, and examines the nature of the substances into which they are resolvable. Thus he formerly began with oxygen, nitrogen, and hydrogen, and then went on to consider atmospheric air and water; whereas now, he begins with atmospheric air and water, and afterwards describes oxygen, nitrogen, and hydrogen, the supposed elements into which the former may be decomposed.

Although our author has thus made the alteration of employing the analytical instead of the synthetical arrangement, he still adheres to his former plan in one important respect; he first gives an account of the general doctrines of chemistry, and afterwards enters upon the history of particular substances. The two first chapters of the work are now, as in the former edition, on the attraction of aggregation, and on chemical attraction, and are not much altered. The second book, although it has changed its title, is substantially the same; it was formerly styled 'of imponderable substances;' it is now, 'of repulsion, and the powers by which it is produced.' Perhaps objections might be made to both of these; but, of the two, we should prefer the former, as less hypothetical: at the same time, we think a still better method would have been, to announce the subjects at length, 'of caloric, light, and electricity.' The chapter on caloric retains nearly its old form, but there are occasional additions made to its individual parts, the principal of which are taken from Mr. Dalton's experiments and speculations, as detailed in his 'New System of Chemical Philosophy.' It will be unnecessary for us to say more concerning them in this place, than that our author always treats Mr. Dalton's opinions with great respect, although he conceives that some of them may have been rather too hastily adopted: this he particularly points out with respect to one of the most important of them, viz. the proposed correction of the common mercurial scale. At the end of the chapter are some additional remarks in favour of the materiality of heat, which, as well as every other part of the work in which this question is discussed, are judicious and candid. There is not much new matter in the chapter on light; but that on electricity and galvanism has necessarily undergone a very considerable alteration, as there is now introduced into it a comprehensive abstract of Mr. Davy's researches on this subject, which appears to be extremely well executed, and derives additional value from the original observations with which it is interspersed.

The second volume, which contains an account of the

bodies that were conceived to be elementary, and their immediate combinations, is the part which has experienced the greatest alterations: we shall point out the order in which the subjects now stand. The first chapter is on atmospheric air, and its immediate principles, and contains an account of the constitution of the atmosphere, of oxygen, nitrogen, atmospheric air, and the chemical agency of oxygen in its pure form, and as it exists in atmospheric air. We have then a chapter on water and its base; one on each of the alkalies and their bases; then one on each of the earths and their bases; and, lastly, on the acids and their bases. We have already expressed our opinion as being generally favourable to Mr. Murray's present arrangement, and especially as we think that, in most instances, it is less hypothetical, and involves less of the peculiarities that attach to any particular system. But, upon this principle, we think there are some parts of the present classification that might be improved: thus, with respect to the constituents of atmospheric air, we should have preferred the synthetic plan, and commenced by giving an account of oxygen and nitrogen. They are substances so well known, and which we are so much in the habit of procuring in a separate state, that we must regard them as real existences, with the properties of which we are well acquainted, nor will they be less so, whether subsequent researches may prove them to be compounded bodies, or whether their elementary nature should be established. We should also have thought it more convenient to have the principal mineral acids placed together, and to have treated of them distinct from their bases, and we should likewise have placed together what were formerly considered as the simple inflammables, substances which possess a great many common properties, and which bear the strongest analogy to each other; nor should we be in any degree influenced by the consideration of these bodies being either elementary or compounded. Sulphur and phosphorus are equally active as chemical agents, and equally important in their relation to other bodies, since the experiments of

Mr. Davy has rendered it probable that they contain oxygen and hydrogen united to an unknown base, as before he made this discovery. In short, we should prefer classing those substances together which bear a resemblance to each other in their properties, and in their action upon other bodies, to a method which unites those substances which are related to each other merely in consequence of their chemical constitution.

Besides the great change in its arrangement, there is a great deal of new matter introduced into this part of the work. In the chapters on the alkalies and the earths, the author has inserted a copious abstract of Mr. Davy's discoveries respecting them, and the same with respect to the inflammable substances, sulphur, phosphorus, and the different carbonaceous compounds. We have an account of the well-conducted experiments of Messrs. Allen and Pepys on these latter bodies, those of MM. Lampadius, Clement, Desormes, and Berthollet junior, on the combinations of sulphur and hydrogen, and those of Dr. Henry and Mr. Dalton, on the different kinds of hydro-carbonous gas.

In the third volume, which treats upon metals and mineral compounds, there are both some alterations, and some additions of new matter: the metals are treated of separately from their ores, which latter are removed to the mineralogical part of the work; and the earths, which formerly were placed in this part, are now removed into the second volume, and immediately succeed the alkalies. We think all these changes are judicious. Respecting the fourth volume, which treats of vegetable and animal substances, we shall only remark, that the author appears to have been diligent in his researches after new matter; the arrangement remains as before, but many of the individual parts have received additions from the recent labours of the British chemists, who are so zealously prosecuting this branch of the science.

These remarks will enable our readers to form some idea of the many improvements which Mr. Murray's work has received; and we must not omit to mention, that he has adopted the laudable expedient of publishing in a separate

form the principal of these additions, for the accommodation of the purchasers of the first edition. The nature of this article does not authorize us to enter into any discussion respecting the general merits of the System, still less to compare them with those of any rival or contemporary performance. We may, however, without hesitation, pronounce it an excellent work; at least, one of the two best publications of the kind which have ever appeared: and we think it a subject of just triumph to the northern metropolis, that it should, nearly at the same time, have produced two systems of chemistry, each of which we consider as far superior to any similar work that has proceeded from either France or Germany.

ART. XIX. *An Introduction to Physiology and Systematical Botany.* By James Edward Smith, M. D. F. R. S., &c. &c. Second Edition. pp. 533. 8vo. With Plates. Longman and Co.

BOTANY may be said to have first appeared in England in 1551, when Turner published his Herbal; but a scientific form was not impressed upon the productions of British botanists, nor was the science much cultivated, till after the appearance of Ray's Synopsis Stirpium Brittanicarum. From this period it was, however, almost confined to the colleges, and studied by the learned only; and it did not begin to be regarded as a liberal acquirement, and to attract general attention, till about the year 1760, after the principal works of Linnæus had appeared. The study of it has been since gradually extending; and, although it has been unaccountably neglected in the education of medical men, for some years past, yet we will venture to assert the science has more votaries in this country, at the present time, than it ever had at any former period. Much of this general taste for botany is undoubtedly to be attributed to the exertions of the learned President of the Linnæan Society, who, from his possession

of the accumulated treasures of Linnæus, and his own habits and studies, might justly be considered as the most likely person to form a good introduction to that science, to which he has devoted himself. We cannot regard the present production, however, in any other light than as a hasty sketch, or text-book, containing the substance of the *popular course of lectures*, annually delivered by him in the Royal Institution. But the celebrity of its author, and the circumstance of the second edition being already before the public, demand from us a full and serious examination.

Before we proceed to analyze the contents of the volume, we must observe, that, although in a work intended for general perusal there is no positive necessity for the lucid and methodical arrangement, which is required in more scientific productions, yet the arrangement ought to be natural and perspicuous. Dr. Smith has certainly not attended strictly to this rule. The anatomy, terminology, and physiology, are strangely interwoven together; and even overlooking this, other instances of confused arrangement occur. Thus we need only notice, that in chapter xix. the parts of the flower are described, and then those of the fruit and seed, before the distinctions between the simple and the compound flowers are pointed out; and the explanation of the peculiar functions of the essential parts of the flower is reserved to form the subject of the next chapter, instead of following, as should have been the case, immediately after the description of the parts of the flower. As a compensation, however, for this censure, we must acknowledge, that, by this intermingling of the subjects, the interest to a general reader is very much increased; the dryness of the anatomical and technical descriptions being constantly relieved by physiological remarks. We shall follow this course of our author, without separately examining each of these divisions of the subject.

In chapter first, the Doctor endeavours to point out the distinctions between animals and vegetables; and details, with great perspicuity, the most prominent circumstances which prove the vitality and irritability of plants. We were,

however, rather surprised to observe the supposition of their sensibility revived; an idea, which we imagined had sunk into the grave with Doctor Darwin: and we are, certainly, not willing to allow that 'such a supposition accords with all the best ideas we can form of the Divine Creator.' p. 4. The gift of sensation was, no doubt, bestowed upon the lower animals, principally for the purpose of enabling them to avoid noxious causes, which might threaten their vitality; and even in the zoophytes, where this faculty is obvious, its effects are generally sufficient to guard them from their most natural enemies: but vegetables possess no such power; and the motions of those which are denominated sensitive plants are not at all calculated to protect them from the depredation of animals. Were vegetables, therefore, endowed with sensibility, the gift could not be regarded as a blessing, but as the greatest curse which Providence could inflict upon them.

Our author, in endeavouring to fix the distinction between animal and vegetable life, is not willing to admit the accuracy of Doctor Alston's definition, which characterizes vegetables as nourished by their external surface, and not by an internal stomach, which is peculiar to animals. We shall not stop to examine his objections, as we mean to make a few observations on the remark of M. Mirbel, which the Doctor considers the most satisfactory he has met with on this difficult subject, and an idea that appears to him, to use his own words, 'so just that I have in vain sought for any exception to it.' p. 6. We shall quote the opinion of Mirbel from his excellent work now before us, instead of Doctor Smith's translation of it.

'Mais ici se présente un charactère sur lequel, peutêtre, on n'a pas assez insisté: c'est la faculté qu'ont les plantes de se nourrir de substances inorganiques, facultè qui ne parôit pas exister dans les animaux: ils dévorent des substances animales ou végétales, et quelquefois les unes et les autres; mais jamais, ce me semble, ils se nourissent de terres, de sels, d'air, et de gaz. Ainsi les vegetaux doivent, pour condition premiere de leur existence, transformer la matière

brute en matière organisée et vivante. C'est un preparation que reçoit la matière, elle ne peut servir à la nourriture des animaux qu'après s'être incorporée aux vegetaux.'*

While we admit the ingenuity and plausibility of this remark, we must observe, that it contains an assumption, which cannot easily be admitted; for if, by the terms *inorganic matter*, *earths*, *salts*, and *airs*, are meant simple earths, and salts, which have never formed parts of organized bodies, the position is not tenable, as it cannot be proved that these are taken in as food by plants. What soil, we would ask, can be found composed of simple earths, devoid of decaying vegetable and animal matter? It is also well-known that salts are merely the stimulants, which, by exciting the vegetable fibre, promote the growth of plants; and so far are they from being their proper nutriment, that if a soil contain, or be supplied with, a greater quantity than is necessary for acting as healthy stimulants, the growing plants are destroyed. A plant, indeed, may be reared in pure powdered flints, or in sand, moistened with water; but in this case the water is the support of the vegetable; and we know that some animals may be supported on water alone; for many aquatic *animalcula*, as far as we can observe, live entirely on it, and convert it into the organic matter of their bodies. As this fluid is the universal solvent, whatever it contains in solution may be absorbed by the mouths of the vegetable vessels; and, as the experiments of Mr. Davy have proved, that even distilled water may contain both saline and metallic impregnations, we have in it a source from which the alkalies, metallic oxides, earths, even silex, and the gases, which are found in vegetables, can be derived; but, that these are the food of plants, is not more likely, than that lime, which forms so large a portion of the animal structure, is the food of animals. We admit that vegetables do not subsist on matter which still retains its organic form; but some of the species of vermes feed on vegetable and animal matter which has undergone only partial decomposition, and returned

* Traité d'Anatomie et de Physiologie Vegetales, Tom. I. p. 19.

to that state in which they are generally found in soils. If these facts be admitted, it appears that nature, in the work of recombination, employs both animals and vegetables, although the latter may be said, with truth, to have the greater share of the labour. Unless, however, there be proofs to shew that they perform the whole, M. Mirbel's remark cannot be regarded as removing the difficulties in this part of natural history. The test by burning, which is recommended as an easy practical mode of solving the problem, is not more admissible, for many plants contain gluten: some, as the carica papaya, a substance not distinguishable from animal albumen; and others caoutchouc; all of which give out, when burnt, nearly the same smell as animal matters afford.

We were particularly pleased with the following observations in the second chapter, where the author, after stating that the intelligent botanist should regard the physiology of plants, their systematical arrangement, and their economical or medical properties, equally as the objects of his studies, remarks; 'the two first are of essential service to each other, and the last is only to be pursued with any certainty, by such as are versed in the other two.' p. 11. This truth, it must be acknowledged, is too little attended to, particularly by the medical practitioners of the present day, many of whom draw the whole information they possess of the plants which they are in the daily habit of prescribing, from the bungling descriptions of dispensatories; without troubling themselves to inquire into their structures, economy, or systematical arrangement. In describing the general texture and the structure of vegetables, Dr. Smith has, with much judgment, had frequent recourse to the excellent treatise of Mirbel.

The general view of the vegetable body is short, but perspicuous; and the parts are separately examined, beginning from the external surface or cuticle, to the medulla. The Linnæan notion of the origin of wood is rejected, and that of Du Hamel and Doctor Hope, which regards it as a deposition from the liber, adopted. We shall transcribe the Doctor's opinion of the use of the medulla. He first states

the opinions of Du Hamel and Linnæus, with the more recent supposition of Mr. Knight, that it is a reservoir of moisture, intended 'to supply the leaves whenever an excess of perspiration renders such assistance necessary;' and offers several judicious objections to each of these opinions, giving the following as his own theory of the functions of this organ.

'There is, in certain respects, an analogy between the medulla of plants, and the nervous systems of animals. It is no less assiduously protected than the spinal marrow or principal nerve. It is branched off and diffused through the plant, as nerves are through the animal. Hence it is not absurd to presume that it may, in like manner, give life and vigor to the whole, though by no means any more than nerves, the organ or source of nourishment. It is certainly most vigorous and abundant in young and growing branches, and must be supposed to be subservient in some way or other to their increase. Mr. Lindsay of Jamaica, in a paper read long ago to the Royal Society, but not published, thought he demonstrated the medulla in the leaf stalk of the mimosa pudica, or sensitive plant, to be the seat of irritability; nor can I see any thing to invalidate this opinion.' p. 40.

In this opinion Doctor Smith is not singular: for, in a certain degree, the same was entertained by Linnæus: and Doctor Darwin was particularly fond of tracing this supposed analogy. The analogy exists, however, in the form only of vegetable pith to the medulla spinalis, and in the mode which the medullary rays branch off, and are diffused through the plant; and it is not difficult to shew that it possesses no functions similar to those of the brain and nerves of an animal. In the first place, the pith is found in perfection in annual shoots, and young plants in the first stage of their growth only; and becomes dry, shrivelled, and is often obliterated, in older plants. In the second place, the loss of it does not affect, in any degree, the vigour or functions of the plant. And were it, as Mr. Lindsay supposes, and which Doctor Smith allows to be probable, the seat of irritability, we should find that the most irritable plants would necessarily have the greatest quantity of medulla; which we can assert, from observation, is not the case. The medulla of plants, when minutely examined, appears to be a simple cel-

lular substance, forming cells of a regular hexagonal form, which are lengthened as the diameter of the medullary cylinder diminishes. The explanation of its functions which appears to us the most probable, supposes, that, as in the very early state of the plant, and in a young twig, the alburnum and bark form a very small part of the diameter of a stem, and are yet too soft and tender to support themselves during the rapid longitudinal extension of their parts, the moist medulla is intended to give firmness, and supply a more extended surface for the arrangement, around it, of the vessels, which contain the sap and other juices of the plant. We can easily suppose how well adapted the medulla is for this purpose, when we consider that its cells are filled with an incompressible fluid in the young twig and plant. But when the first zone of wood is sufficiently firm, and can afford a surface for the extension of the next deposition of alburnum, the moisture of the cells is gradually diminished to dryness; they are compressed, and, after some time, in many trees altogether obliterated; owing to the formation, as Mirbel has ingeniously hinted, of new wood within the first zone which surrounded the pith, and not by the compression of that zone by the subsequently formed wood, as has been hitherto supposed. That the pith performs no function in the older stems, is obvious, from the vigorous state of many hollow trees; and from a recent experiment made by Mr. Knight, who cut out a portion of it from the shoot of a vine, which continued to flourish as vigorously as any of the shoots that still contained their medulla. In the monocotyledonous plants, in which no wood is formed, a parenchyma supplies the place of the medulla; and this either continues altogether turgid with water during the whole life of the plant, however long that may be, as in the *aloë* tribe, some of the species of which survive upwards of a century; or it is interspersed with rents or cavities, which are filled with air, as in *typha*, and in many of the ensiform-leaved plants.

Chapter eighth contains an account of the sap, vessels, and course of sap, with Mr. Knight's theory of vegetation. Our author adopts the opinion of Doctor Darwin and Mr. Knight,

with regard to the use of the spiral vessels, in preference to that of Grew and Malpighi; and, in confirmation of their opinion, describes the experiments of those philosophers, which exhibited the spiral vessels of leafy twigs, that were placed in coloured fluids, filled with these fluids, exhibiting a circle of 'dots round the pith, surrounded by an external circle of vessels containing the white milky juice, or secreted fluid, (when the fig-tree was used,) so remarkable in the fig-tree.' p. 49. Mr. Knight further traced the coloured liquid even into the leaves. p. 50. With regard to the causes which propel forward the sap, Doctor Smith is willing to admit the effect attributed by Mr. Knight to those thin shining plates, called the silver grain, visible in oak-wood; 'which pressing upon the sap vessels, and being apparently susceptible of quick changes from variations in heat, and other causes, may have a powerful effect.' p. 53. But, in admitting a completely mechanical course to produce so considerable an effect in this function, the Doctor seems to have forgotten that he had previously treated of the irritability of plants, and is about to talk, in the next chapter, of their excitability, and the effect of stimuli on it. Surely, where these principles are allowed to exist, it is unnecessary to call in the aid of a mechanical cause to account for an effect, which can be much better explained by their operation. Accordingly, we find the flowing of the sap in spring is explained, in the subsequent chapter, by supposing the excitability of the vegetable body to have accumulated during the cold of winter, and consequently to have rendered the plant more susceptible of the action of stimulants in the spring.

'The same principle accounts for the occasional flowing of the sap in autumn after a sharp frost. Such a premature cold increases the sensibility [susceptibility] of the plant to any warmth that may follow, and produces, in a degree, the same state of its constitution as exists after the longer and severer cold of winter.' p. 66.

We expected from the title of this chapter, viz. 'of the sap and insensible perspiration,' to have had a minute account of the chemical properties of the sap, and the insen-

sible perspiration; but the whole is discussed in two paragraphs, in which we are told, that they are watery fluids, and undergo fermentation, owing to an admixture of some of the secreted fluids. The Doctor does not even hint at the experiments of Chaptal or Vauquelin on this subject. The *cornus mascula*, cornelian cherry, is stated, on the authority of Du Hamel, to perspire more than any other plant, the quantity of the fluid exhaled in twenty-four hours being nearly twice the weight of the shrub. We have not made any direct comparative experiments on this subject, but we are inclined to believe that still more is perspired by the snowy nettle, *urtica nivea*.

The more general secretions of plants, and a short account of each of them, are given in the tenth chapter. Among the secretions, some notice should have been taken of the albumen of the *carica papaya*, caoutchouc, wax, and camphor; and the bitter principle, which is ranked by our author as a secretion, might have been with propriety omitted, as chemists have not yet determined that it is ever naturally formed as a distinct substance. No notice is taken that the components of the majority of the vegetable secretions are the same, viz. carbon, hydrogen, and oxygen, and differ only in their relative proportions to each other, in the different substances which they constitute; although by a knowledge of this fact much light has been thrown on the vegetable physiology; and we must conceive Doctor Smith's chemical reading to be very limited, when he still regards the tanning principle as an acid. The *tabasheer*, or the flinty secretion of the bamboo, *arundo bambos*, which was supposed to be pure silex, is now found to contain lime. In noticing the colours and odours of plants, although many curious peculiarities regarding these properties are pointed out, yet no explanation of the principles on which these depend is attempted. The extraordinary increase of heat, which takes place in the spadix of the *arum* at the time which it begins to open, has not been observed by Doctor Smith; but he mentions Senebier's experiments on the subject, although he appears to be unacquainted with the experiments of MM. Hubert and Borg

de St. Vincent, which prove that this striking phenomenon is not confined to one species only of the arum.

In the next chapter, which treats of the process of vegetation and the use of the cotyledons, our author states it as an undisputed fact, that oxygen is absorbed by seeds in vegetation; an opinion which is at least rendered problematical by the ingenious experiments of Ellis, who found that the quantity of carbonic acid gas, formed in a given portion of atmospherical air, during the germination of seeds, is exactly in proportion to the quantity of carbon required to saturate the oxygen lost by the air. But Doctor Smith does not even mention Mr. Ellis's name, although his essay* appeared prior to the first edition of the Introduction. With regard to the chemical changes which take place in the cotyledons he follows the opinion of Saussure, and of Doctor Thomson, as delivered in the 4th vol. of his Chemistry.

Doctor Smith adopts, after Adanson and Gærtner, the name of embryo, for the rudiment of the plant contained between the cotyledons.

The description of the completely formed vegetable is begun by the root, and continued through the various parts to the fruit; and the dryness of the explanations is agreeably relieved by physiological remarks. In mentioning, however, the duration of roots, wheat is certainly improperly given as an example of a biennial plant.

We are inclined to think that the division '*radix bulbosa*' should be rejected altogether, and the roots of the bulbous plants, which are strictly fibrous, placed under that of '*radix fibrosa*.' 'Bulbus,' says Gærtner, 'est germen compositum, subglobosum, subaphyllum, ex carina brevissima, et squamis succulentis crassis compaginatum, quod tandem sponte a matre sua solvitur.'† Doctor Smith allows that the tunicated bulbs have the closest analogy with leaf buds; but we consider the solid bulbs equally in the light of a bud; for although it has some analogy with the tuberous roots, in being solid,

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* Inquiry into the Changes induced on Atmospheric Air, &c.

† De Fructibus, &c. Introduc. p. iii.

and having the young plant affixed to its outside, yet it differs in having the radicle plate at the bottom of the bulb, which is never found in tuberous roots. Bulbous plants do not absorb moisture from the soil, through the coats of the bulbs, but are supplied by the roots of the radicle plate; and the nutritious matter contained in the young bulb is prepared by the leaves, and deposited in it before the commencement of the winter, as is the case in germs. Bulbs are often produced on the axillas of leaves, and on the flowering summits of stems; they are hybernacula, like germs; and when the plant flowers, after a young bulb or bulbs have been formed, they die in the same manner as the growth of the germ is terminated by the fructification. The analogy, indeed, is in every respect so close as to shew the impropriety of any longer classing them with the roots.

Although bulbs were placed among the roots, yet we find Doctor Smith allows their identity with buds to be almost proved, when he treats of buds. In properly combating the opinion of Dr. Darwin, regarding the distinct individuality of buds, he agrees with Mr. Knight, that the propagation by buds, ' is only the extension of an individual, and not a reproduction of the individual, as by seed.' p. 138. No notice is taken of the different modes in which the leaves are disposed within the bud, or, as Linnæus termed it, *vernation*.

The explanations of terms relating to leaves are excellent, and the examples very happily selected. The functions of these important organs are next considered; their perspiration and absorption; the effects of light upon them; and their chemical action on the atmosphere. Their perspiration is stated to be insensible and sensible; but under the latter are placed manna and wax, which, although they exude upon the surface of leaves, yet cannot, we are of opinion, be regarded as perspiration. To prove the absorbing power of leaves, Bonnet's experiments are detailed; and some curious remarks on the economy of the *sarracenia* and *nepenthes* mentioned. The tubular leaves of the genus *sarracenia* are often found about half filled with water; and many flies, which are attracted by the fœtid smell of the plant, enter

the hollow, become prisoners, and die there, owing to inverted hairs at the orifice of the cavity preventing them from crawling out. The Doctor relates an observation, which is said to have been made by one of the gardeners in the Liverpool Botanic Garden; that 'an insect of the *sphex* or *ichneumon* kind,' was seen dragging flies and tumbling them into the water, contained in the leaves of the *sarracenia adunca*; and supposes that the putrid air of the dead flies may be useful to the plant, and their carcases serve as food for the *sphex*, or its progeny.' With the concluding remark we were much amused, and transcribe it, to shew the mode in which the worthy President philosophizes.

'Thus a double purpose is answered; nor is it the least curious circumstance of the whole, that an European insect should find out an American plant in a hot-house, in order to fulfil that purpose.' p. 147.

Our author adopts implicitly the conclusions of Priestley and Ingenhousse, respecting the action of the leaves of plants on the atmosphere, and regards their opinion as the one now universally received. This, however, is very far from being the case; and many experiments have been lately instituted, some of which have come under our own eyes, which go far to prove that vegetating plants produce, on the atmospheric air which surrounds them, the same changes as are produced by animal respiration. We are indeed surprised, that Doctor Smith has not heard, for so we must conclude from his silence, of the elegant and ingenious experiments of Mr. Ellis, which throw so considerable a weight into the opposite scale, against the opinion which he adopts. That gentleman found that the air in which a plant is shut up for some time, is not perceptibly diminished in bulk; and that the carbonic acid gas found in it, is exactly equal (as we stated before) to what would be formed by the addition of a portion of carbon sufficient to saturate the oxygen contained in the air; and that the plant had lost in weight, as much as the carbon would weigh, which unites with the oxygen to form the carbonic acid gas. Plants, however, do not vitiate the

air so rapidly as animals, and live in any medium that can carry off the superabundant carbon; for example, hydrogen gas; in which they will continue to grow for some time; but animals soon die, when immersed in that fluid.

Chapter seventeenth contains an accurate description of the fulcra; or, as they are more judiciously termed, the 'appendages to a plant;' and the utility of some of these, particularly 'hairs or bristles,' in establishing specific distinctions, is pointed out in the genus *mentha*. In describing, in the next chapter, the different modes of flowering, the Doctor rejects 'the example of a bunch of grapes, quoted by Linnæus, for a *racemus*,' and regards it as 'a true *thyrsus*.' p. 231. Indeed the explanations of the terms throughout the volume are altogether unexceptionable.

The different parts of the fructification are well explained. Besides protecting the flower, the calyx is stated to 'contribute to the growth and strength of the stalk, which supports it, as the leaves do to that portion of branch below them.' p. 254. The opinions of Jussieu and Linnæus, with regard to the means of distinguishing between a calyx and corolla, when a flower has one covering only, are combated; but Doctor Smith does not point out any other certain rule for ascertaining this point, relying simply upon the relative coarseness or fineness in the texture, and the brilliancy in the colouring of the part.

'When green, and coarse in texture, it is a calyx; but, when the part present is delicate and finely coloured, like the generality of corollas, we denominate it such.' p. 262.

Pontedera's opinion, and that of Darwin, concerning the use of the honey to the plant, are properly objected to; but our author, with rather too much confidence, states, that

'There can be no doubt, that the sole use of the honey, with respect to the plant, is to tempt insects, who, in procuring it, fertilize the flower, by disturbing the dust of the stamens, and even carry that substance from the barren to the fertile blossoms.' p. 273.

We would only observe, that many flowers, the pollen of which, from the position of the flowers, must necessarily fall

upon their stigmas, as in *fritillaria*, have the greatest quantity of honey.

The explosion of the pollen on the moist stigma for the purposes of fecundation, is stated as an unquestioned fact; whereas the opinion of Kœlreuter, of which Doctor Smith takes no notice, is now pretty generally adopted. Kœlreuter supposes that the vesicles of pollen, when placed on the stigma, do not naturally burst, but wither; the subtile fluid, which they contain, escaping slowly through the pores of the containing membrane. Neither is any notice taken of the opinion of many botanists, that the appearance of the moisture, which bedews the stigma, indicates the puberty of the pistil: 'verum pubertatis plantarum tempus,' says Gærtner, 'illud sit cum stigmata primum rore isto madent.'*

We must protest against the use of the term albumen, which our author, following Gærtner, gives to the farinaceous matter contained in many seeds, and intended to nourish the germinating embryo. The name was first imposed by Grew, from some analogy which he supposed between it and the white of an egg, to which it bears no resemblance in its properties; and a vegetable principle has been discovered, particularly in the juice of the *carica papaya*, which 'in the greater number of its properties has a strict resemblance to animal albumen,'† another appellation should be given to this farinaceous matter of seeds, in order to prevent confusion.

In concluding this chapter, some very good reasons are given for dissenting from the opinion of Linnæus and Artedi, regarding the fitness of the involucre to mark the genera in the umbelliferous order of plants. The seeds and flowers are considered as sufficient for this purpose, 'while the involucrum is very precarious and changeable; often deficient, often immoderately luxuriant, in the same genus.' p. 311.

The sexes of plants is a fact now so well established and known, that much of what our author has detailed in support

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* De Fructibus, &c. Introd. p. xlvi.

† Murray's Chemistry, Vol. IV. p. 170.

of it, might have been well dispensed with. Many curious contrivances of nature, for shedding the pollen over the stigma, are noticed; the most worthy of attention, in our opinion, are in those flowers, the stamens of which perform their movements independent of external causes.

'In *saxifraga*, and *parnassia*, Eng. Bot. t. 82, the stamens lean one or two at a time over the stigma, retiring after they have shed their pollen, and giving place to others; which wonderful œconomy is very striking in the garden rue, *ruta graveolens*, whose stout and firm filaments cannot be disturbed from the posture in which they happen to be, and evince a spontaneous movement, unaffected by external causes.' p. 324.

Speaking of the assistance of insects in vegetable impregnation, the Doctor gives a story, on the authority of Schreber and Wildenow, concerning the necessity of the presence of a small insect, the *tipula pennicornis*, in the flower of the *aristolochia clematitis*, for this purpose; and adds,

'I do not doubt the accuracy of this account, though I have never caught the imprisoned *tipula*. Indeed I have never seen any fruit formed by this plant.' p. 337.

Now we doubt the accuracy of the story very much; for, although we have often hunted for the tipula, yet we have never so much as got in view; and have nevertheless seen fruit formed by this plant, in the two last successive seasons, in the botanic garden at Brompton.

The last chapter on the physiology, the twenty-first, treats 'of the diseases of plants, particularly as illustrative of their vital principle.' Among these, the fall of the leaf is enumerated, and regarded as a sloughing, or an effort of the healthy branches to throw off a diseased part. In the same manner the cessation of the vital energy, in an animal which has attained its full growth, and dies of old age, may be regarded as a disease. The cause of this disease in the leaves, is not attempted to be explained.

The systematical part of the subject is contained in the three next chapters; and here our author seems perfectly at home; and, with the exception of some very puerile obser-

vations on the nomenclature of plants, regarding the custom of commemorating great men by naming plants after them, in which more enthusiasm than judgment is displayed, the whole is well done. After shortly noticing the systems of the earlier systematists, Cæsalpinus and Tournefort, a clear and accurate exposition of the principles, on which the Linnæan artificial system is founded, is given; then follows a concise explanation of the different classes and orders; and, lastly, what our author denominates 'illustrations' of these divisions of the system. With regard to the system of Jussieu, Doctor Smith conceives it to be of little use to the early student; but to the more advanced, when a plant is already known, it will be found of the greatest utility in making him acquainted with its natural habits and affinities. 'We shall find,' says he, 'we learn more from the doubts and queries of Jussieu, than from the assertions of most other writers.' p. 407. No mention, however, is made of Ventenat's improvements on this system.

The illustrations consist of an enumeration of those plants, which exhibit most clearly the class and order to which they belong, references to the plates of botanical works, particularly those in which the author has been engaged, and some hints of alterations and improvements. We quote the following, as a specimen of the manner in which this part of the work is executed, chiefly because it is short.

'Class 6. HEXANDRIA. Stamens 6.

'1. Monogynia. This, as usual, is the most numerous. The Liliaceous family, with or without a spatha, called by Linnæus the nobles of the vegetable kingdom, constitute its most splendid ornaments. The beautiful white lily is commonly chosen by popular writers to exemplify the stamens and pistils. The less ostentatious genus of *juncus* or rush, which soon follows, is more nearly allied to the lilies than a young botanist would suppose. Near it stand several genera, which have little affinity to each other, and of these *capura* is a mistake, having been made out of a specimen of *daphne indica*, which chanced to have but six stamens.' p. 419.

Practical directions for forming a hortus siccus; the explanations of the plates, which are well executed; and two indexes; one, 'of remarkable plants, or those of which any particular mention, or any change in their classification, is made;' and the other, 'to the explanations and illustrations of technical terms'—close the volume.

The only alterations which we have perceived in the second edition, are references to the plates in the body of the work, so as to render them useful in the explanations of the parts of the plant; and a notice from Lady Amelia Hume, that the *aristolochia sipho* sometimes bears fruit in this country.

Such is this volume; and we have little to add to the observations we have already made. Some distinct account should have been given of the natural orders of Linnæus, and of Gærtner's work, 'de Fructibus.' The common names of the plants referred to, might have been added to the botanical names, in every case which admitted of them; for many plants are known to those ignorant of botany, by their common names, whilst every one cannot procure the works referred to by the learned President.

Among some other errors arising from carelessness, we observe *carbon* and *oxygen* are used as synonymous with *carbonic acid gas* and *oxygen gas;* p. 213: and the same occurs between *barley* and *malt;* p. 291. The words, '*was misled,*' p. 290, l. 8, are substituted, in the present edition, for, '*was led,*' which stood in the first, by which the meaning of the sentence is completely obscured. No example of *caulis triqueter* is given; we would suggest *carex vulpina*. Eng. Bot. t. 307. In p. 96, Linnæus is said to have imposed the name *corculum* on the embryo, 'in allusion to the heart of the walnut;' while, in p. 288, he is said to have adopted this term from Cæsalpinus, which we believe to be the case. In p. 205, also, we are told that the bad effects of sitting under walnut trees result from the evolution of carbonic acid gas; while, in p. 204, 'these effects,' says our author, 'are probably to be attributed as much to poisonous secretions as to the

air those trees evolve.' We notice these as instances of carelessness which might have been easily avoided.

Upon the whole, we are of opinion that this Introduction will advance the general study of Botany, as it displays the science in an alluring form, divested of the dry and minute, although essential, details of more scientific rudiments; and the trammelled mind of modern civilization and refinement must be won to the study of nature by smiles and blandishments. But, a proper scientific introduction to Botany in the English language is still a desideratum: and when we reflect upon the richness of the mine whence the present production issued, and that we had a right to expect a brilliant of the purest water, and the highest value, we certainly feel disappointed at receiving no more than an ordinary gem.

ART. XX. *On the Cultivation of the Plants belonging to the Natural Order of Proteeæ, with their Generic as well as Specific Characters, and Places where they grow wild.* By Joseph Knight, F. H. S. 4to. pp. 127. Savage.*

OF the many works which come before us, in the execution of our critical functions, few are the productions of men who have a practical knowledge of the subjects on which they write; and, therefore, we gladly hail every work, the author of which has had practical demonstration of the truth and efficacy of the plans that he recommends. The volume before us is of this description, and professes to detail the best method of cultivating an order of plants, which its author has long been accustomed to rear with the greatest success.

In a modest preface, Mr. Knight states, as a reason for bringing this work before the public, 'the circumstance of

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* This article was, through an inadvertency, omitted in the former part of this chapter, where it should have appeared, as being the review of a new work.

a great portion of it having been unanimously voted to be printed by the *Council of the Horticultural Society;* but the latter part having excited some jealousy in a quarter which it is now unnecessary to mention, the author's pacific sentiments did not allow him to hesitate one instant about withdrawing the whole.'—We are ignorant of the circumstance alluded to; but, as it has had the effect of making the whole of Mr. Knight's information on this subject public, we have no reason to regret it; nor will the author, we trust, have cause to lament its occurrence, however it may have at the moment irritated his feelings.

The natural order of Proteeæ, of which thirty-six genera are now known, is named from one of these, *Protea,* so denominated from its various shaped leaves and flowers, which holds a place, in Linnæus' *Prælectiones in Ordines Naturales Plantarum,* under the natural order *Aggregatæ.* The plants, of which it consists, are chiefly natives of the Cape of Good Hope, and of New Holland, and were first described by Professor Thunberg, who discovered many of them during his travels; but it was not until after the year 1770, that our knowledge of the species became in any degree correct. Since that period, British botanists have had opportunities of seeing many of the plants alive, as they were reared in the garden at Kew, from seeds collected by the late Mr. Francis Masson, and Mr. James Niven; and in the collection of George Hibbert, Esq. at Clapham, where they were raised under the immediate care of Mr. Knight, who was for some time his gardener, and who is now a nursery-man in Chelsea.

The success, which rewarded our author's attempts to bring these plants to perfection in this country, may be attributed to his attention to imitate, as far as could possibly be done, the soil, and other circumstances which influence their growth in their native climate, and wild state. We cannot too strongly recommend this mode of proceeding to the attention of gardeners, as we are satisfied that many plants have been lost, owing to the foolish notion which too generally prevails, that all exotics, when first imported,

require the heat of the stove. We fear we cannot do justice to Mr. K. by a quotation from the first part of his work, on the general treatment necessary in the cultivation of the Proteeæ; but recommend the perusal of the whole of it to the practical gardener, and those who wish to possess any of the species of this order in their collections. We will, however, transcribe one part of his practice, in order to remark, that it is to the want of the same care that many exotics, particularly *dioici*, do not ripen their seeds in this country; although they regularly flower, and flourish in good health and vigour.

'Many species of this tribe of plants ripened seeds at Clapham; but I was careful to promote their impregnation, by repeatedly rubbing pollen upon the stigma, and exposing the flowers as much as possible to the sun, never suffering any wet to fall upon them at this period; nor have I any doubt that most of these plants, if not all, by attention on the gardener's part at the critical time, when the stigma exudes its viscous liquid, may be made to ripen seeds with us. In the hermaphrodite genera of Paranomus, Erodendrum, and Serruria, some species afford them annually, without any care at all.' p. 13.

In forming the genera, Mr. Knight has taken into account, in many instances, the *inflorescence*, notwithstanding the canon of Linnæus expressly excludes inflorescence from generic characters; and he justifies his doing so, on the score of that immortal systematist having been 'often forced to admit it himself; and this,' says our author, 'he managed with great cunning, by calling the *umbel*, *catkin*, *spathe*, &c. of vegetables, which are only different sorts of inflorescence, *a calyx*.' p. 14. They are arranged under two sections; the first of which contains those with dioicious, and the second those with hermaphrodite flowers. We shall give, as a specimen of the mode in which this part of the work is executed, the generic character of the genus ERODENDRUM, and of one of its species, *speciosum*, as a very well executed coloured plate of its flowering head is given as a frontispiece to the work.

'ERODENDRUM. *Salisb.*

'Flores in capitulo terminali. Bractea 1. inter singulos, præter involucrum majorum coloratarum, rigida. Petala in labia 2. post anthesin apice erecta, antico angusto, cohærentia. Pericarpium 1-spermum, fusiforme, longe barbatum. Stylus persistens. Fruticis; *foliis simplicibus perangustis latissimisve, nunc resupinatis.*

Flowers in a terminal head. A single Bracte to each, besides an involucrum of larger coloured ones, rigid. Petals cohering into 2 lips, their tops erect after the anthers burst, front one narrow. Pericarpium one-seeded, spindle shaped, with a long beard. Style persistent. *Shrubs; with simple leaves very narrow, or broad, in some resupinated.*

'The name is derived from two Greek words εροω and δενδρον, the species of this genus, being preferred to most others in the order, by collectors.'

* *Flores in capitulo oblongo.*' p. 34.

'11. E. *Speciosum* foliis 1—1½ pollicem latis. 2½—4. longis, obovato-lanceolatis, parum marginatis, acuminulatis, adultis lævibus; bracteis extus sericeis; superioribus apice incarnatis, spatulatis, densissime fimbriatis, retusis.

'Protea speciosa. Linn. Mant. p. 36. Lepido carpodendron, &c. *Boerh. Hort. Lugd. B. 2. p.* 185. *cum Icon.* Showy Erodendrum.

'A low shrub growing wild near *Wynberg*, and hitherto known in our collections by the name of *obovatum*. Cuttings strike root without much difficulty; but it requires a very sandy loam, and to be particularly well drained. Stem seldom more than 3 feet high, thick and swelled in cross folds at the base. Leaves 1 to 1½ inch broad, 2½ to 4 long, obovate-lanceolate, somewhat marginated, ending in a little point, smooth when old. Bractes externally silky; upper ones flesh coloured at the top, spatulated, very thickly fringed, retuse.' p. 39.

With regard to the style of the work, we have little to say; for on such occasions criticism is disarmed, and all we look for is plainness and perspicuity. Upon the whole, however, the execution is very respectable; and we ardently desire to see more works of this description, than it has hitherto fallen to our lot to notice. It is at all times a more agreeable task to attribute praise, than to deal out censure. Before, how-

ever, we close our remarks, we cannot avoid taking this opportunity to observe, how much we are impressed with the necessity of a reform in botanical nomenclature, and of fixing it upon some certain basis. At present, names are imposed according to the caprice or fancy of any one who chooses to describe plants; and the multiplicity of synonymes, already embarrassing and inconvenient, must necessarily be increased to an enormous extent. The custom of naming species from the resemblance of their foliage to that of other plants, we must protest against, as it presupposes a degree of knowledge which cannot with propriety be admitted. Thus in the volume before us we have Protea *Thesiifolia*; P. *Loranthifolia*; P. *Bruniæfolia*; Erodendrum *Neriifolium*, &c.; while, at the same time, such specific appellations as *uliginosum*, *alpina*, *ligulæfolium*, *grandiflorum*, &c. as they mark circumstances connected with the locality, natural habits, or appearances of the plants, ought invariably to be preferred. We would be understood not to mention these examples as conveying a reflection against our author, as the fault is certainly not peculiar to him.

ART. XXI. *Elements of the Science of Botany, as established by Linnæus: with Examples to illustrate the Classes and Orders of his System.* In Two Volumes. Plates. Second Edition. London, 1809.

THERE is, we will venture to assert, no country on the face of the globe where knowledge is so widely diffused as in Great Britain. Like a mighty river, it waters the land in every direction; now rolling on clear, deep, and full; now winding in many a gentle current, and branching out into a thousand rivulets; which, although in themselves of little importance, yet spread beauty and fertility on every surrounding spot. But, notwithstanding the great advantages which are acknowledged to have arisen from the extension of information, beyond the college and the cloister, to the

ordinary walks of life, yet the mode of teaching the arts and sciences in Britain is still very defective; and we are far behind other nations, in the same scale of civilization with ourselves, and particularly France, in elementary productions. Not that there is any deficiency of elementary works; for volumes upon volumes, thick as the leaves that strew the autumnal bowers, have issued, and are every day issuing from the press: but unfortunately, with a few exceptions, they are not at all calculated to afford those who take the trouble of perusing them, any guidance to the attainment of the sciences of which they profess to be the elements. These works may be divided into two classes. The first are the productions of learned men, well acquainted with the subject; but who believing that those whom they are willing to instruct, are able at once to enter into all the intricacies of the sciences, write books, which can be understood by the few only who are equally well informed as themselves. The second are sent forth by men who are themselves but superficially acquainted with the sciences they would teach, and who have acquired the little they know without much trouble. These latter works are intended to allure followers to the temple of science, and to scatter roses in their path: but, unluckily, however delightful the avenues may appear, they never bring those who enter them one step nearer to the mansion to which they seem to be the guides. To which of these two classes, or whether to either of them, the volumes before us belong, we will leave our readers to decide from the analysis, which we shall now lay before them.

In the Introduction, we have no definition of a vegetable, no description of the entire plant, nor any explanation of the uses of the different parts of the plant, such as we might have looked for in a work entitled '*Elements of the Science of Botany;*' nor, even allowing, that the words *Science of Botany*, were meant to express *the artificial systematic arrangement of Linnæus*, have we any explanations of the differences between an artificial and a natural system, nor any thing concerning the distinctions of *genera*, *species*, and *varieties*. But we are at once informed, that,

'As plants are generally reproduced by seed, Linnæus chose the parts necessary to that end as the basis of his artificial system of botanical arrangement.' p. 5.

After this the seven parts of fructification are enumerated, and very slightly explained; the differences of structure and variations of the same parts in different plants being altogether omitted, and the most important part of the descriptions thrown into the notes;—to understand which, in any degree, a constant reference must be had to the glossary. The experiments of Linnæus, with regard to the uses of the stamina and the pistillum, are then noticed; and we are informed, that these were made by him the basis of his system. What we have already stated, with an enumeration of the classes and orders, and a glossary at the end of the second volume, which we regard as the only valuable part of the work to the botanical student, make up the sum total of the elementary matter contained in the work. The remainder is a kind of illustration of the Linnæan system; that is, under each class and order, some plant is named and a plate of it given. As a specimen of the manner in which this part of the work is executed, we shall quote the article FLAX, *Linum usitatissimum*, which illustrates the fifth order of the fifth class.

'Flax blossoms in June and July; whether it be a native of England or not, is doubtful.

'Flax appears to have been cultivated as early as we have any historical knowledge; it is mentioned in the Old Testament as cultivated in Egypt. It is a tall, slender, annual plant, with beautiful blue flowers. When it is ripe it is pulled up by the roots by hand, and laid in water to soak till it begins to rot; it is then taken out, spread in the air to dry, and is fit for the operation of breaking, &c.; after which, it is spun, and by the loom made into cloth, from the coarsest sheeting to the finest cambric. From this plant I have seen thread as fine as to be nearly worth its weight in gold, to be afterwards manufactured into lace. Thus, by industry and ingenuity, a simple vegetable is converted into one of the most ornamental and expensive luxuries of dress.

'Flax not only supplies us with that cloth called *linen*, a word derived from *Linum*, the classical name of the plant, but the seeds furnish an oil, called linseed oil, of great importance in painting and varnishing; and after the oil is expressed from them, the refuse, called oil cake, is applied to the fattening of cattle, a food profitable to the farmer, but injurious to the quality of the meat.' p. 43.

Now, without wishing to diminish the importance of the above remarks, we would ask the author of these elements, what information, in a botanical point of view, is conveyed in such a description? what illustration does it give of the class and order under which it is placed? and, even with the assistance of his plate, how is the young botanist to know Linum usitatissimum, if it be before him, when he is unacquainted with all its botanical characters, and reads only, that it is 'a tall, slender, annual plant, with beautiful blue flowers?' And, yet, such is the nature of the majority of the descriptions in the book; the author's chief care in the selection of his examples being directed to the choice of those plants, which will afford him the best opportunity of saying something about their economical uses, or of the country where they grow; or allow him to give a biographical sketch of some celebrated naturalist. This species of information, we must acknowledge, is useful and amusing; but it is not exclusively that which we should expect to receive from a work entitled '*Elements of the Science of Botany.*' Many of the examples are the worst that could have been adduced, as illustrative of the class and order of the *artificial system* in which they stand; for although they bear all the distinguishing characters of their class and order, yet the parts of fructification are either not so obvious as to be easily perceived by an inexperienced eye, or are so minute as to require the aid of the microscope to render them distinct. Among other ill-selected examples we notice *Cyperus papyrus*, *Buffonia tenuifolia*, *Rhamnus lotus*, *Cicuta virosa*, *Galenia Africana*, *Laurus cinnamomum*, *Gossypium herbacium*, *Monniera trifolia*, *Ophrys muscifera*, and *Meberea Guyannensis*. In these cases, the plates offer no assistance, as magnified dissections of the parts of fructification are not given; al-

though these should always accompany representations of plants with very minute flowers, or the parts of which appear confused in a general drawing.

We have probably said enough to shew our opinion of the volumes before us, considered as an elementary work; and we must confess, that we feel equal astonishment and regret, that any one who has a regard for botany, should so far have prostituted the word *elements*, as to bestow it upon a work of this nature. To mislead the young and the ignorant, is a serious crime against society; and the time wasted in looking for information where it cannot be obtained, can never be regained. We regard that opinion as very erroneous, indeed, which supposes the science of Botany to consist in the systematic arrangement of plants; and would recommend to the student to imprint in his memory the following quotation from Dr. Smith's Introduction. 'Botany,' says that learned botanist, 'may be divided into three branches; 1st, the physiology of plants, or a knowledge of the structure and functions of their different parts; 2dly, the systematical arrangement and denomination of their several kinds; and, 3dly, their economical or medical properties. All these objects should be kept in view by an intelligent botanist. The two first are of essential service to each other, and the last is only to be pursued, with any certainty, by such as are versed in the other two.'*

After the censure which we have been obliged to pass upon this production, as far as its title and its contents are at variance with each other, we may be asked why, with so little botanical information to recommend it to public notice, has it already reached a second edition? We answer, that the book is not devoid of merit; and that we have perused it with considerable interest, and obtained from it both amusement and instruction; and think it one of the pleasantest compilations of anecdotes, and observations relative to the vegetable kingdom, we have met with. It contains much

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* Introduction to Physiological and Systematical Botany, p. 11.

curious information: and we shall select one observation, which is new to us, as a proof of what we assert. Under *Dionæa muscipula*, or Venus' fly-trap, in noticing the irritability of its leaves, (or rather, for in this instance the author is incorrect, of the appendages of the leaves,) we are informed that

'Mr. Knight, lately Mr. Hibbert's gardener at Clapham, now a nursery-man in the King's Road, made an experiment of supplying this irritability with fine filaments of raw beef, and that plant was more luxuriant than any other; it seems therefore probable, that the decomposition of animal matter is peculiarly favourable to its economy; and the singular structure of its leaves may be designed to supply it with insects, whose putrescence may act as similar decompositions do, when applied to the roots of other plants,' &c. p. 63.

Now, without subscribing to the above theory, we are much struck with this experiment; and although we disapprove of sweeping conclusions drawn from a single observation, we think it worthy of attention, and will certainly take an opportunity of satisfying ourselves on the subject.

With regard to the style of the work, it is sufficiently neat and perspicuous: the plates are more neat than correct; and too little attention has been paid to display distinctly the essential parts of the fructification in the different specimens. In the sketch of a plant, all the parts, if possible, should be exhibited; but if that cannot be done, the leaves at least ought to be introduced. In many of these before us, we have the flower only displayed. The appendages of the leaves of Dionæa are drawn too small; they are often larger than the leaves to which they are attached. Reseda odorata, although so common, has not the character of the plant; and this is also the case with Hedysarum gyrans, and Calendula officinalis. We would have recommended our author to have copied the plate of Echinops sphærocephalus, in the late Mr. Curtis's lectures; as the one which he has given is, at best, a very poor representation of the plant.

ART. XXII. *Every Man his own Farrier; or, the Whole Art of Farriery laid open; containing Cures for every Disorder a Horse is incident to. To which is added, an Appendix; including many excellent Recipes, and Preparations of valuable Medicines, with Directions how to apply them.* By Francis Clater. The Twentieth Edition. 12mo. pp. 179. Crosby and Co.

THERE is a sort of quackery in this title-page, of which we cannot approve. If the work had really gone through nineteen editions, it became the author to inform us of the additions and improvements which he had made. Instead of this, he writes in his preface,

'The author flatters himself this work will give the utmost satisfaction to the public; having been proved and established by an extensive practice. The writer having served a regular apprenticeship, and [having been] nearly one year a journeyman, to the late William Frost, Farrier, at Nottingham, and being nephew to him, *was entrusted with all the secrets of his profession.*'

After this advertisement, we did not expect much from our author, and were therefore pleased to find that his book contains some useful information; and that the practice, which he recommends, is less barbarous than that which is usually pursued by country farriers.

ART. XXIII. *A Treatise on Veterinary Medicine, in Two Volumes.* Vol. I. *containing a Compendium of the Veterinary Art: or, an accurate Description of the Diseases of the Horse, and their Mode of Treatment; the Anatomy and Physiology of the Foot; and the Principles and Practice of Shoeing. Illustrated by Plates: with Observations on Stable Management, Feeding, Exercise, and Condition.* By James White, of Exeter, late Veterinary Surgeon to the First or Royal Dragoons. Dedicated, by Permission, to His Royal Highness the Duke of York. The Ninth Edition, consi-

derably enlarged. Vol. II. *containing the Materia-Medica, and Pharmacopœia.* A New Edition. 12mo. pp. 675. Johnson.

MR. WHITE's treatise has been favourably received, and well merits the reputation which it has acquired. The structure and functions of the internal organs of the horse are accurately explained: and the author, by his acquaintance with the anatomy and laws of the human system, has been enabled to avoid those errors and inconsistencies which have offended in many of his predecessors. His explication of the pathology of the horse is clear and rational; because he has followed the same means of acquiring information, as is pursued in investigating the diseases of the human subject. The present edition contains some additional matter; and, in particular, we would recommend to notice a method of shoeing *flat* and *convex* feet, suggessed to the author by the Honourable Newton Fellowes.

'In flat, convex, or pumice feet, the *sole* is so thin, as to be incapable of suffering pressure without giving pain to the animal, and causing him to go lame; and so flat, or even convex, as to be much exposed to pressure. The shoe commonly employed for such feet, is *wide* and *hollow*, so that it bears only on the *crust*, a space being left between the *sole* and the other part of the under surface of the shoe. When the horse has travelled a short time on the road, this space becomes filled with dirt, gravel, &c. so that the *sole* is exposed to the same pressure as if the shoe were flat, or the horse without shoes: it is obvious, then, that a shoe so *narrow* as to cover only the *crust*, and so *thick*, as to raise it about $\frac{3}{4}$ of an inch from the ground, will more effectually protect the tender sole, than the wide hollow shoe; unless the horse be going upon a hard even surface, or the rider frequently dismounting to pick out the dirt which accumulates under the shoe.' Appendix, p. 407, 408.

HISTORICAL SKETCH

OF

THE PROGRESS OF MEDICINE, SURGERY, AND CHEMISTRY, IN THE YEAR 1809.

Some persons may think, that we are advancing a paradoxical opinion, when we enumerate, among the causes which retard the advancement of medical learning, the great increase that has, of late years, taken place in the number of authors and of books. The effects, however, of this excessive multiplication of literary productions, have, at length, become so apparent, in the works themselves, and in the conduct of the writers, that no one, who gives an impartial consideration to the question, can any longer dispute the correctness of the inference. We may lament, that the noblest of all human inventions,—an invention, which, when properly directed, contributes so materially to the diffusion of knowledge, and the general improvement of man,—should ever become subservient to the support of prejudice and error: but, humiliating as the confession may appear, a regard to truth compels us to admit, that this abuse of the press has prevailed to a greater extent in medicine, than in almost any other science, and has gone far to counterbalance all the advantages which we have ever derived from its judicious employment.

The reason is sufficiently obvious. In a science, which depends so much on actual observation, but which, at the

same time, from the imperfection of its methods, admits of so much conjecture, the mind, always easily seduced by the love of novelty, soon abandons itself to the rage of systems, which have the appearance of simplifying its study, and of superseding, in some degree, the necessity of practical experience. It is almost needless to add, that the facility, which the art of printing gives to the communication of ideas, has a direct tendency to augment this evil, and to multiply, in particular, sects and their adherents. Hence it has happened, that hypotheses in opposition to every known fact, and opinions the most repugnant to common sense and observation, have often obtained great currency in the medical world, and reigned with undiminished force, through the lapse of many ages. Hence, too, has arisen that admiration of authority and attachment to great names, which cramps the free spirit of inquiry, and quenches all the ardour of original investigation. And hence it comes, that, even at the present day, when we have abjured the dominion of the schools, and cast off the shackles of ancient prejudices; when we possess so many improved means of investigation, with which our predecessors were altogether unacquainted; we still yield occasionally to the delusion,—deviating most widely from the right path of research, mistaking the suggestions of fancy for the decisions of truth, and substituting the fictions of the imagination for the laws of nature.

An inquiry into the use and abuse of medical books, and the causes of their increase, would involve a variety of considerations, which our limits will barely permit us to indicate. Among other circumstances, we should have to shew, in what manner the student, confiding too rashly in the information which books supply, and imbibing too easily the erroneous notions which they inculcate, is led to neglect the observation of disease, and to contemn those more patient methods of research, which alone can give a true knowledge of its nature. We should have to shew, in what manner the powers of memory, and the talent of discernment itself, may become impaired by an immoderate course of reading; and in what manner those systems and abridgements of science,

which were designed to facilitate the acquisition of knowledge, often serve only to encourage ignorance, or to communicate, at most, a superficial learning, not less to be dreaded than ignorance itself. We should have to investigate minutely, the effects that result from the diffusion of this superficial learning among all ranks of society; to trace the causes of the growing demand for such information; and to determine, with precision, the extent to which it should be satisfied. Finally, we should have to examine the various motives that influence authors in their publications; to dive into the inmost recesses of their hearts; to ascertain when their conduct is governed by the honest desire of imparting instruction, and when it is actuated by vanity, or guided by sordid and mercenary views.

On many points of this discussion, it is true, we are led to touch, in our analysis of the medical literature of the year; and it is one chief excellence of our plan, that henceforth (in this country, at least) no work, however contemptible, can pass unnoticed; no literary delinquent, however daring, can hope to escape detection. Already we have had occasion to denounce, and brand with infamy, the practices of a certain class of adventurers, with whom book-making is a trade, and who, in their attempts to impose upon the public credulity, scruple not to employ the most base and dishonourable arts. Already we have seen, in one quarter, at least, the good effects of this public exposure: we have struck terror into the breasts of guilty men. By pursuing stedfastly and fearlessly this open course, we may, without arrogating too much to ourselves, hope, in time, to rescue the literature of medicine from that state of degradation to which it has been reduced by the recreant writers alluded to; and to restore it into the hands of those whose learning and talents fit them for improving and extending it, but who are now deterred from applying themselves with zeal to its cultivation, by the too successful rivalship of vain-glorious men;—by that formidable conspiracy which has thwarted the exertions of the truly wise and virtuous, in all ages, and in all countries,—the conspiracy of mediocrity against genius.

If we have devoted so large a portion of our volume to a detail of the vague and often groundless opinions that are maintained by medical writers,—to an account of the disputes in which they engage, and of the errors which they commit in their inquiries; it has been from a conviction, that nothing can be more conducive to the interests of medical science, than such an exposition. "The history of our opinions," if we may borrow the language of D'Alembert, "shews us how men, impelled sometimes by necessity, and sometimes by impatience, have, with various degrees of success, substituted the probability for the truth; it shews us in what manner, that, which at first was uncertain, has afterwards become true, by being reviewed, investigated, and, as it were, purified by the successive labours of many ages; it offers to our curiosity, and to that of our successors, facts to be ascertained, views to be illustrated, conjectures to be determined, and incipient acquirements to be perfected. The history of our disputes shews us the abuse of words and of vague ideas,—and how the advancement of the sciences has been retarded by passions under the mask of zeal, and by obstinacy under the guise of firmness; it proves how little controversies are calculated to enlighten the mind, and how, when they turn upon certain points, they are even turbulent and dangerous: this species of study, though the least useful for enlarging our real knowledge, should be the most proper for rendering us prudent; but in this, as in other cases, the example of others is of no avail. In fine, the history of our most remarkable errors, whether by their resemblance to the truth, or by their long duration, or by the number or importance of the men whom they have seduced, teaches us to mistrust ourselves and others; and by pointing out the deviations from the proper road of inquiry, it facilitates our progress in the search of truth."*

There is one controversy, which has, of late, attracted no common share of attention, and into the merits of which we have, therefore, entered very fully;—we mean the contro-

* Elemens de Philosophie, p. 9—11.

versy respecting Vaccination. During the past year, as our readers will have perceived, the opposers of the practice have not been inactive; and, though we have been spared the task of criticising any more of the scurrilous publications of Messrs. Moseley and Birch, it has fallen to our lot to notice some attacks from another quarter, which are not less dangerous, because more insidious. To the arguments of Mr. Brown, in particular, we have given the most patient hearing; we have considered, with attention, the proofs which he has adduced, and weighed, with precision, all the particulars of his evidence: the conclusion, which we have drawn, has been, that he is wholly destitute of that candour to which he lays claim, and has been guilty of that contradiction, inconsistency, and confusion, of which he rashly accuses his adversaries. We know not if the detractors of vaccine inoculation will be much gratified to hear, that their conduct has found imitators in other countries; that in France, for example, where the new practice was received with uncommon eagerness, and spread with unparalleled rapidity, our Rowleys, and Moseleys, and Lipscombs, have their exact counterparts, in the Georges Bonnefois, Jean Retifs, Mathurin Vaillants, &c. who, "imbued with all the prejudices of the common people, shew, by their discourses, their ignorance and their absurd prepossessions;"* while the more respectable class of French practitioners patronise the cow-pox, and give, in particular, due honour to its illustrious discoverer.

It is not for us to inquire into the policy of that deplorable expedition, which has wasted the treasures of the country, and doomed to destruction so many brave men—it is not for us to examine the merits of its execution, or to investigate the causes of its failure: but this much we may be permitted to state concerning it,—that the conduct of the Army Medical Board, as connected with the equipment, has more than justified all the strictures which we have passed on its constitution and management; that this Board has convicted

* Bulletin des Sciences Medicales, Mai, 1809.

itself of a greater breach of trust, than its bitterest enemies ever ventured to impute to it. The written testimony and the oral confessions of its members, have now proved, beyond the possibility of doubt, and to the satisfaction of the plainest understandings, that there was "something rotten" in that fabric, which was reared with so much expense, and supported for such a length of time, to the great injury of the service, in spite of all the symptoms of corruption and decay which it exhibited. They have proved, that the Army, always ill supplied in its medical department, was left, in the hour of its greatest need, almost wholly devoid of medical assistance; that, when the day of danger had arrived, the guardians of its health had deserted their posts, or were found embroiled in squabbles about their inglorious patronage. Whether the personages who compose the new Army Medical Board will display greater skill and ability in the conduct of affairs, we cannot presume to determine: but the manner of their appointment (viz. in consequence of the recommendation of a Board of *General Officers*) strikes us as being not the most unexceptionable, or the best calculated to inspire confidence; and the history of their education and habits inclines us to suspect, that their choice of subordinate officers may not always fall on the best qualified and the most deserving; while, from their advanced age, there is even reason to dread, that, when required, upon an emergency, to fulfil the high duties of their station, they may declare themselves "altogether incapable of performing" such a service.

The origin of contagious diseases being, in general, of such a nature as to elude all sensible demonstration, their investigation has been a matter of peculiar difficulty, and the most opposite doctrines have been maintained with respect to their appearance and propagation. On this, as on other subjects, however, the discussion has often terminated in a mere verbal dispute; the contending parties being, otherwise, perfectly agreed in their statement of facts, and in the inferences to be deduced from them. Such, at least, we have found to be the case with regard to the controversy, that has been carried on with such warmth between Dr. Chisholm and Dr.

Miller, on the subject of the yellow fever of the West Indies. The vague notions entertained on this topic by Dr. Adams, and the fallacious conclusions which he has drawn from imperfect evidence, with the view of persuading people to forego the advantages of what he himself had formerly termed an " invaluable prophylactic," call for severe animadversion: for nothing can be more dangerous, than to adopt and disseminate rashly, in a matter so nearly affecting the public safety, opinions which are neither confirmed by experience, nor sanctioned by the legitimate deductions of reason.

That there should be a fashion in medicine, as well as in less important arts, cannot excite any wonder, when it is considered, that the same remedies often produce very different effects, when administered by different persons, or according to their more or less judicious employment. Of all remedies in use, however, none have experienced such alternations of favour and abuse, as mercury and its various compounds; and, even at the present day, physicians are at variance, with regard to the propriety of their exhibition in several very common diseases, and with regard to the comparative advantages of their operation. In reference to the particular dispute, to which we have already directed the attention of our readers, we may observe, that both parties are possibly somewhat in the wrong; that Dr. Saunders, arguing from the bad consequences which he may have seen follow its employment in certain cases where it was incautiously given, has proscribed its use rather too freely; while Dr. Curry, on the other hand, reasoning from an opposite experience of its efficacy in hepatic complaints, has bestowed on it, perhaps, too high and unreserved approbation. It is well known, that when the mind becomes wedded to any particular system, or entertains any particular view of disease, it sees objects, as it were, " through a glass darkly," or disfigured by the hues of its own peculiar fancy. We do not say, that either of the above-named gentlemen is infected with this vice; but, without any disparagement to their acknowledged learning and skill, we may venture to warn them of an error, which has very commonly prevailed among medical reasoners, and

which men of the most transcendent talents have not always been able to avoid.

Though the diseases of the heart have been treated of, with considerable ability, by several modern writers, we have to regret that our knowledge of them is still very inaccurate, and their diagnosis, in particular, so imperfect, that many of them are known to us only by the appearances which they present on dissection. The labours of Mr. Burns on this subject have appeared to us deserving of commendation: but we cannot help wishing, that he had digested his observations with more care, and imparted to his treatise a greater degree of precision. From the excellency of the works which have been produced on this important branch of the art in France, and from the concurrent testimony of several impartial judges, in favour of the skill and discernment which the French practitioners display in their treatment of organic lesions of the viscera, we are inclined to think, that the physicians of this country have been guilty of remissness, in not taking advantage of all the light, which dissections properly conducted may throw on the nature of the diseases in question. So well satisfied are we, however, with the specimen which Mr. Burns has given of his abilities in this line, that we shall be glad to see him resume the inquiry which he has begun, and pursue it in all its different bearings: we only beseech him to be in no haste to publish an improved edition of his book, but to take advantage of all the opportunities, which time and a more matured experience can afford him, of rendering it a truly classical guide.

Many of the suggestions contained in the publications of Dr. Kentish, and the Hon. Mr. Cochrane, will be found worthy of attention. Practitioners seem now beginning to be fully aware of the importance of warm-bathing as a remedy in chronic diseases; and it will give us much pleasure to see conveniences for the employment of the vapour-bath, on the plan recommended by Mr. Cochrane, introduced more generally into our public establishments.—Another not less beneficial application of caloric, is that which was some years ago recommended by Dr. Beddoes, and to which Dr. Buxton

has again called the public attention. The bad effects which we have almost invariably seen result from sudden vicissitudes of heat and cold, in disorders of the pulmonary organs, and the influence, on the other hand, of an equal and moderately high temperature, in checking their progress, and alleviating their more distressing symptoms, convince us of the utility of the practice, and incline us to second the recommendation.—Every one, who is in the least conversant with disease, must have been often perplexed and embarrassed, on meeting with cases, where the free internal administration of the medicines, which were indicated, became, from peculiar circumstances, dangerous, or wholly impracticable. The profession, therefore, is under no small obligation to Mr. Ward, for the experiments by which he has shewn, that, on such occasions, there is yet one resource left. With regard to opium, the external use of which forms the principal subject of Mr. Ward's book, perhaps it might sometimes be worth while, if frictions with it fail, to try if fumigations would not succeed: there are, at least, some relations of its powerful effect, in producing stupor, when employed in this way, by the natives of the East Indies, for nefarious purposes; which induce us to believe, that a similar exhibition of it, in a medical view, might prove highly serviceable.—Few modern improvements have been received with more approbation, and few have been more generally adopted, than the revived practice of purgation, for which we are indebted chiefly to Dr. Hamilton of Edinburgh, and to Mr. Abernethy; but, in their eagerness to bestow applause, the public have overlooked the claims of the original inventors of this mode of treatment, and ascribed to these authors the whole merit of a practice, of which they are only the improvers.—Collections of remarkable cases, detailed with method and precision, must always be acceptable to the physician; though detached cases alone can never lay the foundation of substantial learning, and a connecting medium is required, to enable him to arrange, combine, and apply to practical use, the information which they furnish: "vaga enim experientia, et se tantum sequens mera palpatio est, et homines potius stupe-

facit quam informat." Without meaning, then, to call in question the utility of such publications, we may be allowed to express a wish, that more discrimination were evinced in the selections which they contain, and more regard paid to the quality than to the quantity of the papers. The first volume of the Transactions of the Medical and Chirurgical Society, which appeared last summer, and which suggested these remarks, though unquestionably a volume of some value, falls very far short of the expectations which we had formed of its contents, and is certainly much below the standard of those memoirs, which have been, from time to time, given to the world, by the other medical societies that have flourished in this metropolis.

After the discoveries of modern chemistry had given us more correct ideas of the nature of the different processes which it is the business of pharmacy to superintend, and of the compounds which they form, a change in the language of the latter branch of the art appeared to be a natural consequence. This was first attempted by the College of Physicians of Edinburgh; and, although the experiment may not appear to have succeeded so well as could have been wished, no one can dispute their title to much praise for the industry and zeal which they evinced. The London College have now followed their example, and published an improved Pharmacopœia. Though we cannot approve of all the particulars of the reform which they have introduced, in the arrangement and nomenclature of the medicines, their performance, considered as a whole, is creditable to the authors, and superior to any thing of the kind before produced. Should the College, however, think proper to give a revised edition of this Pharmacopœia, we would recommend it to their consideration, whether it might not be desirable, to assimilate still further the languages of chemistry and of pharmacy, at least, in all cases where no satisfactory reasons can be assigned for their discordance. If it be desirable to extend the new nomenclature to the articles of the materia medica, why allow such a wanton deviation from it, as that of placing the name of the base of neutral salts first; thus

obliging every chemist who applies himself to pharmaceutical operations, to learn two languages, where one would suffice?

We had thought that the reign of authority in medicine was over; and that, whatever other faults medical writers might commit, they would no longer disgrace themselves by a sectarian spirit, or fetter themselves in their inquiries by a bigoted admiration of particular masters. We have been deceived. The last year has produced two notable instances of this vitious proceeding; the one in the panegyrical exposition of the Cullenian System, which Dr. Parr has given in his Dictionary; the other in the Commentary on the doctrines of Mr. Hunter, which has issued from the pen of Dr. Adams. Between the two cases, however, there is this difference,—that, in the former, the eulogist has had the candour to admit the existence of some slight blemishes in his favourite theory; while, in the latter, the commentator has found matter for veneration, even in the most glaring prejudices and misconceptions of his author;—expatiating, with delight, on beauties, where others can see only defects; and worshipping, with pious awe, every deformity of the idol he adores. To this idol all the sons of Esculapius must do homage, acknowledging, with humility, that in its presence they are as nothing; while the hierophant, who presides over the mysteries, continues to offer up incense, and to proclaim with a loud voice, that "Whoever believeth not in Mr. Hunter, and all he hath uttered, cannot be saved." This is the way with all commentators: "Qui librorum interpretationem suscipiunt, in ipso interpretationis vestibulo auctores suos omni laudum genere cumulare conantur, præsertim si auctores illi an exigui fuerint momenti, aut nullis propemodum indigerent commentariis, et philautiæ impensius indulgentes, non verentur eisdem, modo *divini* modo *admirabilis* nomen tribuere, seculi sui miracula appellare; tractandam denique materiam, tanquam divini partum ingenii, et reipublicæ summopere necessariam singulis commendare. Ad hæc moventur interpretes, non quidem necessitate tuendæ, aut promovendæ gloriæ talium auctorum, sed occulta quadam

libidine conciliandi sibi plausum eruditorum hominum, propterea quod eximios, præstantissimosque auctores susceperint interpretandos."* That a person who ventures to talk about the Baconian philosophy, and accuracy of language, and method in reasoning, should run headlong into this error, would indeed surprise us, if any thing could surprise us in a writer, who, while criticising the works of others, commits the very blunders which he reprehends; and who, while inculcating the advantages of using only precise terms, and of avoiding, as much as possible, figurative expressions in medicine, employs as vague, inaccurate, and metaphorical a style, as any author with whom we are acquainted. Dr. Adams may complain, that we are severe, and do not do justice to his industry and talents for investigating disease. But if he really possesses such industry and talents, it is the more necessary, that the faults of which he is guilty, in their application, should be clearly pointed out; and this is truly not an age in which half words and whispers will take effect. We esteem Mr. Hunter's labours, as well as Dr. Adams; but we are not blind to his many imperfections, and we have felt it our duty to resist this attempt to magnify his importance, at the expense of his cotemporaries and successors, and to the general prejudice of medical learning. "Summæ pusillanimitatis est," as Lord Bacon well observes, "authoribus infinita tribuere, authori enim authorum, atque adeo omnis authoritatis, Tempori, jus suum denegare. Recte enim Veritas Temporis filia dicitur, non authoritatis. Itaque mirum non est, si fascina ista antiquitatis, et authorum, et consensus, hominum virtutem ita ligaverint, ut cum rebus ipsis consuescere, tanquam maleficiati, non potuerunt."

Surgery cannot reasonably be expected to exhibit, from year to year, very numerous or striking novelties. Its objects come, for the most part, under the immediate cognizance of the senses, and have exercised the attention and industry of

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* Baglivi. Prax. Medic. lib. i. cap. viii.

many able and well educated men for the last century. Within this period its progress has been very great; and the art has been brought to so advanced a state of improvement, that even a slight extension of our surgical knowledge can be acquired only by considerable exertion. In this state of things we must be satisfied, if we find diseases more accurately described and carefully discriminated, new remedies introduced, or operations simplified and improved. The limits of the art have been somewhat extended in this way, since the publication of our last volume; and we must acknowledge, that our brethren have not been idle; although they have been rewarded by no brilliant discoveries.

In the review of Scarpa, contained in the first volume of the Register, it is observed, that the artery of the upper extremity had not, at that time, been tied behind the clavicle. A quotation is also extracted from the work, in which the enlightened author declares his perfect conviction, from a knowledge of the anatomical structure, that this operation might be performed with perfect safety. The numerous anastomoses detected by the anatomist between the arteries of the neck and of the upper extremity, and the freedom with which he finds injected fluids conveyed through these channels, when the main trunk is tied, could leave no doubt in the mind of a person acquainted with the facts, that the artery might be safely tied behind the clavicle. The point has been proved by a direct experiment. In the first place, however, we have to record an unsuccessful attempt of this kind—not with the slightest insinuation of censure—for the name of the gentleman who operated, will be deemed a sufficient sanction of the belief, that no practicable means of relief were omitted. " In a case of subclavian aneurism, which lately occurred in Guy's Hospital, Mr. A. Cooper attempted to tie the subclavian artery above the clavicle. The aneurism was very large, and the clavicle was thrust upward by the tumour, so as to make it impossible to pass a ligature under the artery without incurring the risk of including some of the nerves of the axillary plexus. The attempt was therefore aban-

doned."* In the comparatively more fortunate attempt, to which we have alluded above, the operation was performed by Mr. Ramsden, on a man in St. Bartholomew's Hospital. No account of this case has been published; but, as the fact is so very important, we add the few following particulars on the authority of a gentleman, who witnessed its progress. The subject was a middle-aged man, with an aneurism in the axilla, at his first admission, of the size of an orange, and moveable in its situation. A painful and œdematous state of the limb had already occurred, and no pulsation was perceptible at the wrist. In the course of nine days the tumour had increased prodigiously, so as to elevate the clavicle, to distend very painfully the pectoral muscles, and to assume a livid hue, which threatened sloughing, at its most prominent point in the axilla. The œdema and pain in the limb were proportionally augmented. The operation was resolved on under these very unfavourable circumstances. An incision was made behind the sternal end of the clavicle, and, after about an hour and a half, the artery was secured by a single ligature. The difficulty, which made the business so long, arose from the great depth of the wound, and the impossibility of turning any ordinary instrument under the vessel, so as to get the ligature round it. The arm was warmer than the opposite one, by three degrees, on the evening of the same day, and no deficiency in its temperature appeared at any subsequent period. The length and severity of the operation, and the extent to which the local disease had been allowed to proceed, will prevent our readers from experiencing any surprise, when they are informed, that the man died on the fourth day after the operation. Our informant could only learn, that the aneurismal sac contained a large quantity of coagula in an extremely fetid state; and that the sides of the artery had united. This case decides the interesting questions concerning the nourishment of the limb, and the closing of the vessel, and fully authorizes us

* London Medical Review, June, 1809.

to expect success, when we operate at a proper period of the complaint.

In both the cases, which we have mentioned, the greatest difficulty was experienced in consequence of the great depth of the artery, from the want of an instrument by which a ligature could be passed round it:—a difficulty which occasioned the operator to leave his work unfinished in the first instance, and which had nearly been attended with the same consequence in the second. As the anatomical position of the vessel must cause embarrassment of the same nature in any future instance, and as the same difficulty must exist in other cases, we shall perform an acceptable service to our readers by pointing out to them, in Bichat's edition of the works of Desault,* the description of an instrument expressly calculated to obviate this inconvenience. "C'est pour éviter cet inconvénient, que Dessault avoit imaginé une aiguille à ressort, composée d'une gaîne d'argent, droite d'un côté, recourbée à l'autre extrémité en demicercle, renfermant une tige élastique, dont l'un des bouts, saillant hors de la gaîne, s'adapte exactement à son ouverture, et se trouve percé d'une fente transversale. L'instrument est introduit, comme nous l'avons dit dans l'observation précédente, au-dessous de l'artère, et lorsque la pointe est parvenue du côté opposé, la gaîne est maintenue fixe, tandis qu'un aide pousse la tige élastique, qui sort ainsi du fond de la plaie, et présente au chirurgien son ouverture, où il passe la ligature; la tige est retirée ensuite dans la gaîne, qui l'est elle-meme à son tour, avec le fil qu'entraine la fente."

Additional experience has been laid before the public on the aneurism of the carotid artery. Besides two very valuable cases detailed by Mr. A. Cooper in the Medico-Chirurgical Transactions, we have to notice an unfortunate instance which occurred to Mr. Cline. The pressure of the tumour on the larynx and œsophagus affected the respiration and deglutition, and occasioned a frequent and troublesome cough. These symptoms were relieved, at first, by the ope-

* Vol. II. p. 560.

ration, but recurred in an increased degree, and destroyed the patient on the third day. " Mr. B. Travers, demonstrator of anatomy at Guy's Hospital, has tied the carotid artery in a woman, who laboured under an aneurism by anastomosis in the left orbit, by which the eye had been protruded from its socket. Two small round ligatures were applied, but the artery was not divided: the threads separated on the twenty-first and twenty-second days without hemorrhage, or any alteration in the functions of the brain." To this account, which is taken from the London Medical Review for June, 1809, we add the following quotation, from a subsequent number of the same work, (January, 1810.) " We are gratified to have it in our power to announce the complete success of the operation stated in our seventh number, to have been performed for an aneurism by anastomosis in the orbit. The tumour has become solid, and shrunk to less than half its magnitude, and the pulsation has entirely ceased." This highly interesting case proves, in the most indisputable manner, that the apprehensions, entertained by some surgeons, of injurious effects on the brain, from tying the carotid artery, are altogether visionary: and it tends, with one of the facts recorded by Mr. Cooper, to prove that this vessel may be operated on, with as little risk as any other in the body. Two or three cases have occurred, since the publication of our last volume, in which the external iliac artery has been tied with complete success.

It will not be uninteresting to compare the state of operative surgery in this country, on the subject of aneurisms, with the most recent representation of the practice followed in France in the same complaints. The corrected and enlarged edition of Richerand's Nosographie Chirurgicale, in four thick octavo volumes, (Paris, 1808,) affords us a very favourable opportunity of instituting this comparison. The public professorship of Surgical Pathology was bestowed on the author, by an imperial decree, as a reward for his labour; and the work is thus presented to our notice with all the " pomp and circumstance," that can possibly attend a scientific production. In the outset of his undertaking, Mr. Ri-

cherand throws down the gauntlet to the English surgeons; complains that they do not recognise, what all the rest of the world allows, the superiority of French surgery; and asserts, that if the merits of the two nations were weighed together, there could be no doubt on which side the balance would incline. (Tom. I. p. 23.) The following remarks will serve to shew how far these pretensions are well founded with respect to the subject of aneurism. He places the wounds of the carotid arteries among those which are mortal;—because there is no point of support for compression;—and because the vessel could not be tied without the most imminent risk of injuring the jugular vein and the accompanying nerves. (Tom. IV. p. 34.) The former objection is very unfortunate, since the artery is actually in contact with the vertebral column; and the latter difficulty has not even been mentioned by the English surgeons who have performed the operation. When the aneurismal tumour occupies the axilla, or the bend of the thigh, the case, according to Richerand, is beyond the reach of art. (Ibid. p. 104.) He mentions the expedient, suggested by Desault in such cases, of tying the vessel beyond the swelling, and adds an example; of which, as it is the only recorded instance, we subjoin the particulars. An aneurism of six inches in length occupied the upper part of the thigh, and extended towards the bottom of the abdomen, so that it was considered impossible to tie the artery above the tumour. A ligature was placed on the vessel, below the swelling, after a very laborious dissection. The pulsations were increased, and the bursting of the tumour seemed so probable, that a successful attempt was made to apply a ligature above. The patient did not recover. (p. 105.)

In the following extract, the author's opinions concerning the aneurisms of the common femoral and axillary trunks are very fully expressed, and require no comment from us.

" When an aneurism affects the upper part of the crural artery, just after it has left the abdomen, is it justifiable to cut through the lower part of the abdominal muscles in order to expose and tie the external iliac artery? If we can

believe the editors of the Bibliothèque Britannique, this bold operation has been successfully performed in London, by Dr. Abernéthy. We are told that this practitioner did not hesitate to make his way into the pelvis, by cutting through Poupart's ligament; but, not to mention the great difficulty of the operation, which must be performed in the dark, so that the passage of the ligature round the vessel is not at all aided by the sight, the inclusion of the iliac vein and of the *nerves at the upper orifice of the pelvis* must cause gangrene. But, if the patient should escape this risk, which is hardly possible, enormous herniæ must inevitably follow, from the great weakening of the abdominal parietes.

"In axillary aneurisms the important question is, whether they are situated before or behind the clavicle? The trials of L'Héritier on the dead subject shew that a ligature cannot be passed round the artery so as to include it with the clavicle, without the greatest risks of wounding the tube, nor without including the axillary vein and the nerves of the brachial plexus. Desault and Pelleton have attempted the operation, without success, on the living subject. If the affection were situated in the hollow of the axilla, towards the end of the axillary trunk, amputation of the arm at the shoulder-joint would be the only means of saving the patient." p. 106, 107.

The two Charities for the relief of persons affected with diseases of the eyes, have become firmly established, and have reached that extensive utility, which must very highly gratify the benevolent feelings of their patrons. The extraction of the cataract is practised at one of these institutions, and with greater success than it has ever met with, in any other hands. We cannot state the precise numbers of the fortunate and unsuccessful results, as we have no printed report to refer to; but we know, that the latter are so few, that the operation may be deemed certain of its object, unless some unfavourable circumstance is present. We need not state how complete a contrast to this representation would

be exhibited in the fate of patients operated on in general hospitals. We cannot help indulging a wish, that the vast opportunities of practice, afforded by these charities, should be employed for the purpose of settling the hitherto disputed question, whether depression or extraction be the preferable operation. Among writers, the greatest authorities are decidedly in favour of the former; while the two celebrated oculists of this metropolis practise the latter exclusively. This apparent contradiction will surprise us less, when we reflect that the practice of the oculist depends entirely for its existence, as a distinct branch of the profession, upon this single operation; and, that if couching were introduced instead of it, any given surgeon would be able to cure cataracts as well as the most expert oculist. From these considerations we had great pleasure in hearing that the late Mr. Saunders, Surgeon to the London Infirmary for the Eye, had practised a modification of couching in certain cases, and particularly that he had applied his method to very young subjects, in which extraction is altogether impracticable. This gentleman was on the point of communicating to the public his experience on the above-mentioned subject, when an apoplectic attack suddenly removed him from a situation at which the exertion of his talents was not less beneficial to others, than honourable to himself; just when he was beginning to receive the well-deserved reward of public fame and emolument. While we deplore the loss experienced on this occasion by the public and the profession, it is satisfactory to learn, that Mr. Saunders's manuscripts are nearly ready for the press, and that his work will appear without delay. In the mean time we may state, as a matter of general report, that the operation performed by Mr. S. on young children, consisted simply in puncturing and disturbing the cataract, without attempting to depress it. The opake substance, when its natural connexions are thus destroyed, will be removed by absorption. Our readers will be pleased to see Mr. Saunders's own statement of his proceedings; which we extract from a letter published in the report of the London Infirmary, 1809. "In addition to the

observations made on the former reports, and equally applicable to the present, there is one point on which I must beg the indulgence of expatiating; I mean the adaptation of an operation on the cataract to the condition of childhood, by which I have successively cured, without a failure, thirty-one persons born blind, many of them in infancy, and one even at the early period of two months. Reserving, for another occasion, the communication of the method which I pursue for the cure of very young children, I shall no farther compare it with extraction, than by observing, that extraction is wholly inapplicable to children, or only fortuitously successful. Those who on all occasions adhere to this operation, and have never turned their thoughts towards the application of means more suitable to this tender age, have been obliged to wait until the patient has acquired sufficient reason to be tractable—otherwise, when they have deviated from this conduct, the event has afforded little cause of self-congratulation. How great the advantage of an early cure, is a question of no difficult solution. Eyes originally affected with cataracts contract an unsteady and rolling motion, which remains after their removal, and retards, even when it does not ultimately prevent, the full benefit of the operation. A person cured at a late period cannot overcome this awkward habit by the utmost exertion of reason, or efforts of the will. But the actions of the infant are instinctive. Surrounding objects attract attention, and the eye naturally follows them. The management of the eye is therefore readily acquired, his vision rapidly improves, and he will most probably be susceptible of education about the usual period."

The number of patients admitted and cured since the opening of the London Infirmary, as exhibited in the same report, will afford the clearest proof of its extensive utility. From March, 1805, to the same month in the year 1809, there have been admitted 6609 patients; of whom 5302 have been cured. The following statement exhibits the number admitted in one year, with the affections under which they laboured.

" Admitted from the 25th of March 1808, to the 25th of March 1809, 2357.—Remained under care, on making up the last ANNUAL REPORT, 390. Total, 2747 ; of whom 356 are still under the care of the Charity—200 have absented themselves—146 are incurable—2 were dismissed for misconduct —73 relieved, and 1970 are cured, as under the following heads ; viz.

Acute inflammation	530
Acute inflammation with thickened eye-lids, approaching the state of lippitudo	195
Acute inflammation accompanied with purulent discharge. Adults	32
Acute inflammation with purulent discharge. Infants	74
Acute inflammation with pustules of the cornea	166
Acute inflammation with ulcers of the cornea	378
Acute inflammation with ulcers of the cornea, and crusta lactea in an extreme degree	29
Protusions of the iris through openings of the cornea, caused by ulceration	18
Inflammation of the iris	50
Partial opacities of the cornea	40
Total opacity of the cornea	15
Gutta serena	1
Imperfection of sight from debility of the retina, from various causes	9
Strabismus with double vision	1
Tinea	193
Lippitudo	64
Preternatural growth and excrescences of the conjunctiva	14
Inversion of the eye-lids	15
Eversion of ditto	1
Tumors in the eye-lids	57
Wounds of the eye	35
Diseases of the lachrymal passages	28
Restored to sight by the operation for the cataract	25
Total of cured	1970"

A charity formed on the model of the London Infirmary has lately been established at Exeter, under the care of Mr.

Adams, to whom Mr. Saunders had communicated his method of operating on children. The success of this gentleman, according to the public reports of the institution, both in operating on subjects born blind, and in the general practice on the eye, has not been inferior to that of his instructor.

Under the name of Fungus hæmatodes of the eye-ball, Mr. Wardrop has described a very peculiar affection, hitherto confounded with carcinoma of that organ. He has succeeded in establishing its existence as a distinct disorder, and has given a clear account of its ordinary progress and appearances. He has bestowed the same name on certain affections of other organs; and his observations will at least prevent us from confusing with cancer, diseases which resemble it only in not yielding to any means of art. The attempts at curing cancers have been renewed, in spite of the repeated failures already experienced in that enterprise. Mr. Carmichael proves the efficacy of certain salts of iron, both for internal and external use, in cases at all events resembling carcinoma: and Dr. Lambe endeavours to shew that the progress of cancerous ulcers has been modified, and the sufferings of the patients materially relieved, by a strict regimen of vegetables and distilled water.

Mr. Astley Cooper continues to perform lithotomy by means of the knife alone, with constant success; and we hear that this method has been lately adopted in the Exeter Hospital. The prejudice, which this deviation from the accustomed routine will probably encounter, may be diminished by our observing, that surgeons are by no means unanimous in their preference of Hawkins's method. "The cutting gorget," says Richerand, "is employed almost exclusively in England, Italy, Germany, and the North of Europe; the instrument of Frère Cosme, used by individuals in all countries, is generally adopted by the French." (Tom. III. p. 515.) The instrument itself, and the manner of operating with it, are well described in his work. The apparatus, consisting merely of a staff, knife, lithotome caché, and forceps, engages our commendation by its simplicity. The

situation and direction of the external incision, as advised by this author, are the best calculated for the purposes of the operation: commencing on the left of the raphé, at about ten lines in front of the anus, it should be continued downwards and backwards, between the anus and the tuberosity of the ischium, for an extent of two or three inches. When the fat and muscles covering the urethra have been divided, the canal laid open in its membranous portion, the lithotome introduced into the bladder, and the staff removed, the former instrument should be so placed, that its cutting edge may be directed obliquely downwards and towards the left, in correspondence with the course of the external incision. It should then be drawn out horizontally, by the right hand grasping the handle, so as to make the blade quit its sheath. In this way an incision is made into the urethra and neck of the bladder, directly opposite to the cut in the integuments, and the forceps, guided by the fore-finger of the left hand, introduced for that purpose into the wound, are carried in a straight direction into the cavity of the bladder. Such is the French operation, which, if properly performed, seems to be very well calculated for attaining our objects. The use of the finger in examining the course and size of the incision, and the position of the stone, and afterwards in guiding the forceps; the place of the cut in the integuments; and the course of the opening in the bladder, are circumstances of particular advantage in this plan. The following are the comparative merits of the operation by the lithotome caché, according to the opinion of Richerand. "By cutting as it is drawn out, and not when it enters, a false passage cannot be made, and the neck of the bladder cannot escape division. If it slips from the groove of the staff, the blunt end is resisted by the cellular substance, and thus we are warned to withdraw the instrument, and introduce it again into the groove. The instruments, which cut as they go in, make way for themselves; and the mischief is done before we perceive that they have taken a wrong direction. Where the incision is made from before backwards, the parts yield

and elude the instrument: a narrow cut and a consequent difficulty in removing the stone are the consequences. When the lithotome is employed, the neck of the bladder cannot escape the action of the blade, but must be divided in an extent corresponding to the degree of its aperture." p. 536, 537.

The operation of tying the vena saphena, for the cure of ulcers, kept up by a varicous state of that vessel, has been attended, in many instances, with dangerous and even fatal consequences; to which we think it the more necessary to direct the public attention, because the proposer of this practice represents the operation as a mild and trivial one, and perfectly free from danger.* A young plethoric man died on the 22d day after the operation. There were no very striking appearances of local mischief, but the constitutional affection was of a violently inflammatory kind. Another case ended fatally after the expiration of two months; abscesses having formed in the course of the vein, &c. Very extensive and tedious local disease, with great danger of life, and protracted sufferings for many months, have followed this operation under our own observation; and some instances of fatal terminations have been reported to us.

Our sketch would be deemed imperfect, if we were to pass unnoticed the lectures lately begun at the Royal College of Surgeons in London. Hitherto this body has been known to us only by its demands on our purse; we may now look forwards to a more pleasing prospect, and anticipate some remuneration for our losses. London surgeons, at least, have a very strong claim on the College, in equity, if not in law. They pay thirty guineas for the privilege to practise surgery—which every apothecary does actually practise without any such license: and they have the further privilege of paying twenty shillings annually—for no one purpose that we have ever heard even hinted at. How far

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* Edinburgh Med. and Surg. Journal, April, 1809, Art. 6.

the regular practitioner is protected in the pursuit of his profession may be estimated by the cursory inspection of any morning newspaper; the columns of which actually teem with quack advertisements from Members of the College. The Hunterian collection having been purchased by the public money, and a magnificent building having been prepared for its reception at the public expense, the College have determined that public lectures should be given, in order to promote the probable object of these measures, the advancement of surgical science. Six lectures on anatomy are to be delivered annually, under the significant and appropriate name of "Addis and Gale's Lectures;" twelve on comparative anatomy under the not less happily chosen term of "Museum Lectures;" and twelve on surgery, which have been christened "College Lectures." These preliminary arrangements of nomenclature are all that we can at present mention, except that the "Addis and Gale" orator drew, in his opening harangue, a very brilliant view of the measures which the College had taken, and intended to take—for the promotion of science; and decked out, in the most imposing colours, the halcyon days in which all these arrangements will be brought into full operation. We defer our opinion of the matter until we get a nearer view of the promised land. As the museum and the theatre were furnished at the public expense, we were rather surprised to find, that admission to the lectures was confined to Members of the College, and such students as possessed tickets of attendance at London hospitals. Knowing, as we do, that country hospitals are managed at least as well as those of the metropolis, and that the pupils have much better opportunities of instruction, in consequence of their numbers being smaller, and the proceedings being conducted more immediately under the eye of the surgeon, we concluded at first, that this distinction arose from a desire to make up for the disadvantages under which the pupils of the London establishments labour:—in other words, that the country students, having enjoyed superior opportunities, did not need to attend the "Addis and Gale Lectures." But another

fact overturned this supposition: a candidate can hardly obtain an examination at the College, unless he has attended a London hospital. A subsequent discovery enables us to unravel the whole mystery:—nearly all the examiners are surgeons of hospitals in the metropolis, and the pupils of such hospitals pay fees of twenty-five or fifty guineas per annum, which fees are pocketed by these examining surgeons! Most truly have we been called a shop-keeping nation; for the mean, pitiful spirit of trade, which contemplates every object only as a means of profit, intrudes itself even into our scientific establishments. Such are the auspices under which the College-lectures are opened.

In drawing up our annual sketch of the progress of chemistry, we must again observe, that it will not be in our power to confine ourselves very accurately within the limits of the year. From the difficulty with which the periodical works of the continent are transmitted to this country, they are generally a long time in arrear; and in the present instance, although we believe that we have had access to the latest importations from France, yet the journals that we have seen, extend only to the commencement of the year 1809.

There is nothing in these, nor in any of the English publications, which can properly be considered as forming any alteration in the general doctrines or theory of chemistry. Mr. Davy's galvanic experiments, particularly those in which he has examined the action of potassium upon ammonia, have given rise to many speculations and hypotheses; but we think them not sufficiently matured, to require being detailed in this place. In the mean time, we have the satisfaction of knowing, that this illustrious chemist is still ardently prosecuting his discoveries, and we may reasonably expect that his present labours will be no less successful than his former ones. We have already noticed his researches concerning the nature of some of those bodies which were for-

merly thought to be elementary, such as sulphur, phosphorus, and carbon: he seems to have proved, that they are compounds, and he has rendered it highly probable that the two former of them possess a metallic basis; but as we have given a sufficiently copious abstract of these experiments in our review of the Philosophical Transactions, it will be unnecessary for us to dwell longer upon them. We must not, however, omit to mention the ardour with which the subject has been taken up in France. No sooner were the discoveries of Mr. Davy known there, than the French chemists engaged in the investigation, recognised the correctness of his processes, and in some instances extended and improved upon them. MM. Guy-Lussac, and Thenard, have been particularly active in their researches, and to them we are indebted for the method of procuring potassium by means of chemical affinities, without the aid of the galvanic power. They were also the first who decomposed the boracic and fluoric acids; although Mr. Davy afterwards took up the subject, and carried it to a greater extent. These authors have likewise examined, with a considerable assiduity, the action of potassium upon the metallic oxides, and on a variety of metallic, earthy, and alkaline salts. We may here mention the papers of M. Curadan, in which he endeavours to prove, that sulphur, phosphorus, boracic acid, and the alkalies, may all be resolved into different combinations of hydrogen, nitrogen, and carbon; but the papers are written in a confused manner, and the experiments are not marked out with that degree of accuracy, which would be necessary to establish facts of such importance. M. Gayton has ingeniously employed the principles of galvanism to explain the phenomena of mineralogy. He had in his possession a specimen of the sulphuret of antimony, one part of which seemed to have been converted into oxide. Now, he conceived that this transition could have been effected in no way but by the decomposition of water, in consequence of the operation of galvanism; and he accordingly endeavoured to imitate the process of nature, and succeeded in procuring a substance which was very similar to the native mineral.

One of the volumes of the Annales de Chimie makes us acquainted with the existence of a new philosophical society in France, which appears to have been originally founded by M. Berthollet, named, from its local situation, the Society of Arcueil. We have an account of some of their papers, which appear to possess considerable merit. There is one by Guy-Lussac on the capacity of different gases for caloric. He constructed an apparatus, which consisted of two receivers connected together; each of them being furnished with a thermometer. One of the receivers was filled with air, and the other empty: the air was then passed in different proportions from one to the other, and the effect which it produced on the thermometer was observed. His general conclusions are, that in the same gas, the changes of temperature are proportional to the changes of density, but that they differ in different gases, and that the capacities of different gases differ at the same temperature. Perhaps the apparatus can scarcely be regarded as capable of that degree of accuracy which is requisite for such delicate investigations.

In the Philosophical Transactions of the last year, we have two papers by Dr. Woolaston, which, although on subjects of a minute nature, display to great advantage the accuracy of observation for which this gentleman is so eminently distinguished. The first contains a description of a new species of platina, which has been lately brought from the Brazils: it differs from the former in containing native palladium, while it is destitute of iridium, rhodium, and iron. The other paper consists of a series of experiments undertaken to prove the identity of the new metals, columbium and tantalum. On the subject of metallurgy, we have a valuable paper by M. Hassenfratz, on the alloys of potassium and iron. He was led to the inquiry, from knowing the effect which charcoal produces in the smelting of iron ores, and from considering that this charcoal contains a quantity of potash, which may be reduced during the process, and united to the iron. He was hence led to observe the result of the combination of these metals. He observed, that there were two proportions in which they appeared the most disposed to

unite: when the maximum of potassium was used, it appeared to bring the iron into that state, which has been termed cold-short; but, in the minimum quantity, the potassium appeared to improve the quality of the iron. This hint should not be neglected by the English manufacturers.

During the course of the last year, we have had two valuable sets of experiments on the salts of barytes; the one by Mr. Aikin, the other by Mr. Thompson. It is well known that a great difference of opinion existed respecting the proportion in which the acids entered into their compositions. These gentlemen very nearly agree with each other in their results, and also with Klaproth, and some other of the most distinguished continental chemists. We have, in the Annales de Chimie, an account of the analysis of some *more* meteoric stones, or, as they are called in France, aërolites. In addition to their former constituents, M. Sage has announced the presence of alumine, and this has been confirmed by Klaproth and Vauquelin; but it is not quite clear, whether the substances which they examined were somewhat different from the former ones, or whether, in consequence of a less perfect operation, the alumine had been before overlooked. M. Saussure, the son of the celebrated naturalist, has been engaged in a set of elaborate experiments on the composition of alcohol and ether, which although not, perhaps, in every respect satisfactory, are at least deserving of attention, and will serve as a valuable foundation for those who may wish to pursue the subject.

In vegetable chemistry we have the result of the associated labours of MM. Fourcroy and Vauquelin, in an analysis of what is called the smut of wheat. We are informed, that it contains phosphoric acid, and phosphoric salts, a carbonaceous matter, and a fœtid oil; and, in short, seems to consist of the gluten in a state of putrefactive decomposition. The same chemists have instituted, and, as it would appear, with success, a process for forming acetic acid by the distillation of wood: it is spoken of, as a manufacture likely to become important in an economical point of view. An attempt has been made by M. Parmentier to procure sugar from the juice

of the grape, and we are assured that this project promises to be highly beneficial. Dr. Bostock has published a set of experiments on vegetable astringents, in which he maintains some opinions different from those usually adopted. He attempts to prove, that extractive matter is not a distinct principle, but is only to be regarded as a modification or combination of the other constituents of vegetables. He has, in another essay, on the combination of tan and jelly, endeavoured to shew, that, in the analysis of vegetables, the compound formed by the union of these substances is not uniform, but that its composition varies according to the proportion of its constituents employed in the experiment. The same author has also been examining the nature of the serum of the blood; and he states it as his opinion, that this fluid does not contain any thing to which the appellation of gelatine ought to be applied. In our review of the Philosophical Transactions, we have given an abstract of the very valuable researches which Messrs. Allen and Pepys are continuing to make on the subject of respiration; and, in the same article, Dr. Pearson's experiments on expectorated matter, and Mr. Brande's on albumen, have received due notice.

We shall conclude this sketch by announcing to our readers a piece of information which we have obtained from one of the late numbers of M. Delametherie's Journal, that a French translation is preparing of Dr. Thomson's system of chemistry. It comes out under the patronage of M. Berthollet; and, in announcing the work, he bestows upon the original a high, but not extravagant encomium. The translation itself is executed by M. Raffault.

REPORT

OF

THE STATE OF HEALTH AND DISEASE, DURING THE YEAR 1809.

The experience of the last century has contributed to throw much light on the subject of epidemic diseases, which had been long treated upon gratuitous and hypothetical principles; and the numerous facts, which have been successively ascertained, although they do not amount to a complete elucidation of the whole phenomena of epidemic constitutions, yet they have removed much of the obscurity which involved our inquiries, and afford us a tolerably distinct view of the path which lies before us. Accordingly, the language of the writers of medical ephemerides has now assumed a more precise and definite form: the occult and supposititious qualities of the atmosphere are less frequently appealed to; but its obvious variations, and its sensible influence, partly on the living body, and partly on the various conditions of soil, from which many exciting causes of disease exhale, are justly deemed sufficient to account for those prevalent maladies, which the accidental importation or dissemination of a specific contagion, the scarcity or depraved state of provisions, the occurrence of some general panic, or the excessive fatigue and labour of large bodies of men, as in battles or sieges, do not enable us to explain. The ample historical detail of facts, with which we prefaced our report for the year 1808, seems to afford this inference beyond all controversy. We there traced the coincidence of the most frequent and fatal epidemics in large cities, (of which London is a striking example,) and the existence of

certain conditions of the soil and superficies of the ground, on which they stand;—a coincidence, which is also observable in the epidemic or endemic diseases, which generally occur in camps, when they are for some time stationary, or situated in low and damp situations. Following the course of improvement, by which the imperfections of a stationary camp have been gradually done away, and the paving, draining, and general cleanliness, adopted by the police and by individuals, have prevented the accumulation of a stratum of animal and vegetable matters, constantly collecting and suffering decomposition, in and around large cities; we then found that the plague began to cease from its ravages, that the remittent fever (which "raged like a plague," according to Burnet) next was mitigated in its frequency and fatality, that intermittent fever likewise began to diminish the number of its victims, and that malignant continued fever became less prevalent and less destructive among the families of the poor. We found, that, from the commencement of the general improvements in London and Westminster, in 1762, the remittents and intermittents had almost disappeared; that dysentery was but an occasional occurrence; and that, from this period, the annual mortality was gradually diminished, notwithstanding the rapid and extensive increase of the population in the out-parishes; so that the annual average of deaths is at present considerably smaller than it was a century ago, and less by several thousands, than it was about the middle of the past century.

The seasons themselves, however, have undergone little or no change, as we proved from the testimony of medical writers of the 17th century, especially of the elegant Claromontius. The same vicissitudes of temperature, and the same severity of the vernal months, were then the topics of complaint as at present. Yet we now find that the order of the seasons, in respect to the production of disease, is nearly reversed; although, until those improvements in the structure and economy of the metropolis were made, the ancient character of the seasons continued to be correct: "Saluberrimum ver; autumnus longe periculosissimus."

The inference from these data, for the detail of which we must refer to our former volume, is obviously this; that the "constitution of the atmosphere," as to heat and cold, dryness and moisture, which the changes of season occasion, is not the source of epidemic diseases; and that the alterations in the condition of the air, which formerly rendered it the pregnant cause of disease and death, especially in the autumnal months, were not any occult intestine changes, not any general contamination brought from afar; but an impregnation received upon the spot, a poisonous exhalation which that portion of the air, immediately encompassing us, drank up from our own impurities. Hence, while the air was pestilential in the city or near the swamps, it was the breeze of health in the village and on elevated ground: and Dr. Heberden satisfactorily proved, that, in proportion as the cities of Europe were late or early in adopting the improvements in structure and police, to which we have alluded, the pestilence continued to visit them for a longer or shorter period.*

In these temperate latitudes, then, experience has proved, that if, by removing the impurities of the soil, we deprive the atmosphere of those adventitious qualities, which it thence acquired during the hot seasons, and upon which its deleterious "constitution" entirely depended, the air at those seasons is actually most conducive to health. From this view of the subject, we readily perceive the source of an immense diminution of mortality, and of course of a much greater diminution of disease; and can readily account for the subtraction of eight or ten thousand from the annual bill of deaths, within the last eighty years, notwithstanding the great increase of the population of the out-parishes of London. Deprived of its adventitious properties, and capable only of affecting us by its sensible qualities, its heat and cold, dryness and moisture, &c. the atmosphere inflicts the greatest portion of disease in those months, in which its temperature

* Observat. on the Increase and Decrease of particular Diseases, p. 84.

is lowest and most variable; viz. in the spring and winter, from January to April inclusive. But formerly these very seasons were the most healthy, or, perhaps we ought to say, the least sickly. Yet, even in the most healthy season, the spring, intermittent fevers were generally very prevalent, although less general, and less fatal, than those of autumn. So that we may certainly conclude, that the most unhealthy season, under our present improvements of public and private economy, is considerably less unhealthy, than the most favourable which our ancestors knew; the *saluberrimum ver*. And when we reflect on the multitudes of disorders, which the autumnal exhalations generally propagated; and contrast this condition with our own; when even the disorders of the "saluberrimum ver," are greatly diminished,—the extraordinary and universal amelioration of the public health, in our own time, becomes most manifest; and we cannot be surprised that in the years 1740, and 41, upwards of 30,000 deaths should be recorded in the bills of mortality, while, in the past year, 1809, only 16,680 are registered, the smallest number that has occurred in any year since the close of the 17th century.

We noticed, in our last Report, an observation of Dr. Heberden, that the annual mortality had increased from the beginning of the eighteenth century to the middle, and that it was at its greatest height from 1720 to 1750, from which time it gradually decreased. It may be observed, also, that the number of births, which had increased from the beginning till about 1730, began again to decline, and was lowest in the middle of the century, from 1740 to 1760, from which time it has gradually increased. The average annual number of christenings, which had been 15623, in the first ten years of the century, became 17111 in the second decade, and 18203 in the third; but in the fourth decade it was only 16830, and in the fifth and sixth, it was 14458, and 14789, respectively. Now as the births were at the lowest number, while the mortality was at the highest, it is obvious, that not only the increase of the population of the metropolis, but a

very large proportion of the ordinary number of inhabitants, must have been then supplied by emigrants from the country. The average excess of the deaths over the number of births, which in the third decade of the eighteenth century, viz. from 1720 to 1730, had been 9289, and in the fourth, 9962, amounted in the fifth to no less than 10894. So that from the year 1740 to 1750, a supply of nearly *eleven thousand* persons from the country *annually*, was required to support the population of London at the same standard. But, since those improvements have been made, to which we before adverted, the annual number of births has gradually increased, on the one hand, while that of the deaths has more rapidly diminished; insomuch, that, before the close of the century, the births had, in three different years, exceeded the deaths. From 1760 to 1770 the average excess of the deaths above the births, was 6265 annually; from the latter to 1780, it was 4290; from 1780 to 1790, it was 1407; and in the last decade it amounted to only 936: but in the years 1790, 1797, and 1799, the births exceeded the deaths by the numbers 842, 1631, and 836, respectively. Since the commencement of the present century the average is still more favourable to population, the births having greatly exceeded the deaths every year, except two, namely, 1801 and 1808; and the average excess of the births above the deaths, during the nine years of the present century already elapsed, is 1348 annually.—In the past year, 1809, which may perhaps be considered, on the whole, as one of the most healthy years, of the mortality of which we have any record, the excess of the births above the deaths amounts to little short of 3000; the decrease in the number of burials, compared with those of the preceding year, is considerably above 3000; and the total mortality is less than in any year since the city was rebuilt after the great fire. We here subjoin the Bill of Mortality for the year.

The Diseases and Casualties in the Year 1809.

Abortive and Stillborn	514	Measles	106
Abscess	49	Miscarriage	2
Aged	1251	Mortification	167
Ague	4	Palsy	123
Apoplexy and Suddenly	203	Palpitation of the Heart	1
Asthma and Phthisick	488	Pleurisy	19
Bile	2	Quinsy	3
Bleeding	24	Rheumatism	2
Bursten and Rupture	15	Scarlatina	1
Cancer	55	Scurvy	4
Childbed	123	Small Pox	1163
Colds	15	Sore Throat	7
Colick, Gripes, &c.	15	Sores and Ulcers	5
Consumption	4570	Spasm	24
Convulsions	3463	St. Anthony's Fire	2
Cough & Hooping Cough	591	St. Vitus's Dance	1
Cramp	2	Stoppage in the Stomach	20
Croup	81	Strangury	1
Diabetes	1	Teeth	308
Dropsy	736	Thrush	39
Evil	2	Tumour	1
Fevers of all kinds	1066	Water in the Chest	11
Fistula	3	Water in the Head	252
Flux	9	Worms	5
French Pox	29		
Gout	30	Bit by a Rattle-snake	1
Gravel, Stone, Strangury	10	Bit by a mad Dog	1
Grief	5	Bruised	5
Jaundice	26	Burnt	30
Jaw Locked	4	Drowned	124
Inflammation	511	Excessive Drinking	7
Influenza	3	Executed	6
Livergrown	21	Found Dead	8
Lunatick	166	Fractured	2

Fright	1	Overjoy	1
Frozen	1	Poisoned	4
Killed by Falls and several other Accidents	68	Scalded	5
		Smothered	1
Killed themselves	52	Starved	1
Murdered	1	Suffocated	7

Christened { Males 9981, Females 9631 } In all 19612.

Buried { Males 8636, Females 8044 } In all 16680.

Whereof have died,

Under Two Years of Age	4937	Fifty and Sixty	1419
Between Two and Five	1916	Sixty and Seventy	1235
Five and Ten	754	Seventy and Eighty	1063
Ten and Twenty	566	Eighty and Ninety	369
Twenty and Thirty	1145	Ninety and a Hundred	54
Thirty and Forty	1472	A Hundred	2
Forty and Fifty	1748		

Decreased in the Burials this Year 3274.

There have been executed in the city of London and county of Surry 16; of which number 6 only have been reported to be buried (as such) within the Bills of Mortality.

ALTHOUGH the numerous registers of meteorological phenomena render it unnecessary for us to give an accurate journal for the year, we shall, pursuant to the plan adopted in our preceding volume, draw a brief sketch of the

State of the Weather in 1809.

The general temperature of the year must be considered as having been, on the whole, cold; and its general character, as variable and unsettled: so that the peculiarities of the respective seasons were not very distinctly marked, at least

after the month of January, and a sort of vernal atmosphere prevailed. The year commenced, as the preceding one terminated, with considerable severity; and two heavy falls of snow occurred during January, accompanied by gales of wind, and followed by frost, which continued for eight or ten days: in the second instance, towards the end of the month, the frost was very intense, and the fall of snow was so great, and lay so deep in the streets of London, that many of the hackney-coaches were dragged by three, and some by four horses. The change of temperature, however, was great and sudden, so that the rapid melting of the large body of snow, not only near the metropolis, but through the country in general, was followed by great floods, and many of the roads and low grounds round London were rendered impassable during a few days in the beginning of February. During this month, however, the weather was mild, and the wind most commonly blew from the west, with occasional rains. In March and April the east-winds prevailed, and produced an almost uniform state of cold weather, with much humidity from frequent rains. The whole of the month of April, indeed, was unusually chill, and several falls of snow occurred, especially in the first week, and on the 20th and 21st days, when they were considerable. The temperature of May was generally low, and rains not unfrequent, except in the second week, when a few warm days were observed: the coldness and humidity were augmented, after a thunderstorm on the 19th; and high winds continued to prevail for some time, from the N. and N E. The summer partook of the same character, being generally cool, often cold, and exceedingly unsettled, the rains occurring very frequently, though of no long continuance; and thunderstorms, with much lightning, were unusually numerous. Although these storms, by which considerable damage was sustained in various parts of the country, ceased with August, moderate rains continued almost daily till the commencement of October. A fortnight of clear settled weather occurred in October; after which, until the middle of November, a damp and muggy atmosphere prevailed, with frequent fogs, some of them of extraordinary density, and

with occasional showers. In the third week several sharp frosts occurred; and, during the remainder of the month, as well as the whole of December, the air was generally heavy and humid, with occasional fogs, and frequent light rains. The summer and autumn, although apparently ungenial, were not, on the whole, unfavourable to vegetation; and the harvest, for the success of which considerable apprehensions were sometimes entertained, proved ultimately not unproductive, and was gathered without any material injury.

The diminution of mortality in the year 1809, compared with that of 1808, is most observable in three articles in the Bill, viz. in Consumption, Measles, and Aged; but most particularly in the measles. During the past year, indeed, both measles and scarlet-fever have been comparatively rare, and during the summer especially, these contagions were seldom seen to operate. Not so, however, the small-pox: this disease, with an uniformity which might surprise us, did we not know the regularity of the causes which contribute to propagate it, has proved fatal to 1163 persons; a number within *six* of the sum of its victims in the preceding year. It is obvious, however, on the whole, both from the great diminution of mortality, and from the particular statements in the Bill, that London has been more than usually free from any prevalent or epidemic disease during the year 1809.

The life of the aged is very dependent upon the temperature of the atmosphere: the vital powers, feeble and languid, require a genial warmth for their support, and readily sink under any derangement of the functions, especially of the lungs, which cold is liable to occasion. Hence, the winter and spring are peculiarly fatal to aged people; and when those seasons are mild, the mildness may be deemed equivalent to the addition of another year to the life of great numbers in this predicament. If our memory be correct, Dr. Heberden remarked, in his excellent paper concerning the effects of the successive severe and open winters of 1795 and

1796,* that a sort of estimate of the temperature of the winter might be made from the mortality of the old. In illustration of this, we may observe, that the deaths under the head "Aged," in the severe month of January 1809, amounted to 165, in February to 99, and in March to 123; whereas, in June, the numbers, under the same head, were only 81, and in July 76.† It must be added, however, that, from the mode of constructing the Bills of Mortality, the data which they afford on this subject must be particularly imperfect; as the searchers do not appear to adopt any fixed period, at which the term is used, and it is obvious that a considerable number of those between 60 and 70 years of age are not enumerated under that head.

To give an account of the various pectoral disorders, which prevailed, as is usual, in the spring to a considerable extent, would be little else than to repeat the observations which we made on the same subject in our former Report.‡ It is obvious, however, that, notwithstanding the severity of January, and the general coldness of the spring from the beginning of March, the diseases of the chest were not, on the whole, so fatal as in the year 1808. Under all the heads of "Asthma and Phthisick," "Consumption," and "Cough and Hooping-cough," the numbers are considerably below those of the preceding year. Probably the mildness of the weather in February, which is generally (allowance being made for its shortness) the most unhealthy month of the year, may account for the diminished mortality; for, although catarrhal affections were subsequently prevalent to a great extent, they were less severe and acute at the later periods of the spring, than those which usually occur earlier.

We might also repeat the observations contained in our last Report, respecting the occurrence of rheumatism, and of sporadic cases of dysentery, during the year 1809. It is remarkable, however, that, notwithstanding the humidity of

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* See Philos. Transactions.

† See Weekly Bills of Mortality.

‡ Vol. I. p. 346.

the months of August and September, very few instances of intermittent fever, under any of its types, were observed in London during the winter. Some practitioners, indeed, thought that the fevers of the autumn shewed a tendency to the remittent form, consequent on the humidity of the season: but, on the whole, idiopathic fever has been so rare an occurrence, during the whole year, that scarcely any inference can be deduced of any importance. It is certain, that the summer and autumn, which were devoid of their ordinary characteristic, heat, were likewise devoid of their usual concomitant diseases: a general good health prevailed throughout. The bilious secretion, which appears to undergo peculiar excitement under great atmospheric heats, and to give rise to cholera, or bilious vomiting and diarrhœa, and to that form of gastric fever (to borrow a phrase, which our cotemporaries have perhaps too hastily relinquished,) that has been denominated synochus biliosa, was seldom found to be deranged during the coolness of the past autumn; and these diseases, therefore, were seldom observed. Typhus, even in its milder forms, has been almost unknown to the physicians of hospitals and dispensaries, whose opportunities of ascertaining the existing maladies of the poor render their testimony on this head indisputable. Malignant typhus has not been seen in the metropolis, we believe, during the past year, in any situation. We understand, that the admissions into the House of Recovery, established for the cure and prevention of contagious fever in London, have been considerably less numerous, within the last year, than during any year since the period of its institution, and that, among the cases admitted, few instances of proper typhus were met with.

Hydrophobia has been nearly extinct during the past year. In addition to the case mentioned in the Bill of Mortality, only one other instance, which occurred without the Bills, viz. at Somers' Town, has come within our knowledge. In the last-mentioned case, the appearances of slight inflammation, which have frequently been discovered, on dissection, about the cardiac orifice of the stomach, and in the pharynx and œsophagus, were not found; and some appearances of

congestion in the vessels of the brain were the only indications of morbid derangement which the knife detected.

The bite of a rattle-snake was, perhaps, never before enumerated among the causes of death, in the Bills of Mortality of London. Most of our readers are probably aware, from the newspapers, that the reptile was confined in a cage, for the purpose of exhibition, and that, being irritated by the carpenter employed to repair its cage, who was in a state of inebriation, it bit his finger. The usual distressing symptoms of the operation of the poison immediately ensued, and the man was taken to St. George's Hospital, where he died about a week afterwards. It is extraordinary, however, that he recovered from the immediate effects of the poison, both the local and constitutional symptoms having been so far removed, that he was deemed altogether convalescent; when the secondary effects of the bite, if they may be so called, terminated his life; namely, the occurrence of gangrene in the finger bitten. Large doses of ammonia were administered in the first instance, we understand, and with decided benefit. The particulars of the case and of its treatment, will probably be published by the Royal Society, to whom it was communicated by Mr. Home.

It would have been a source of the highest satisfaction to us, could we have announced the accelerated progress of vaccination during the last year. It is true, that we could not expect any such beneficial change: the unworthy means, which had been too successfully employed to mislead the ignorant, to deceive the credulous, and to play upon the passions and prejudices of those, who, as Mr. Windham observed, "have nothing but prejudice and passion to guide them," had necessarily produced an impression on the public feeling, too durable in its nature to be effaced by the lapse of a year. The principal attempts to corroborate these impressions have been made by two contemptible journals, which, under different titles and masters, have lingered in a forced state of existence, by gratifying the malignant passions of a few readers, by means of scraps of calumny against individuals, and by attacks upon all establishments. A perpetual suc-

cession of alleged failures is supplied by these publications, and an abundant proportion of illiberal abuse upon all the friends of vaccination. These writers, however, are content to throw their dirt under the shelter of a mask: Mr. Birch is the only one of the party, who has had the effrontery to do the same act openly. Since the former parts of this volume were committed to the press, this surgeon has published what he entitles a "Report of the true State of the Cow-pox Experiment, at the close of the year 1809." This Report, which would certainly be disgraceful and derogatory to the reputation of many surgeons, is a collection of unconnected scraps, consisting of inuendos and misrepresentations respecting the practice of vaccination, amounting in the whole to *six* pages, the result of a year's meditation; from which we learn the extent of the fecundity of this sage's head. By the addition of a letter from the Cheltenham Chronicle, with one from Mr. Moore, satisfactorily refuting the statements of the former, and others signed with the *mark* of Mary Fluck, and Ann Dodeswell, by which the direct testimony of Dr. Jenner is attempted to be impugned,—by the help of a blank page, and by numbering two more pages than actually exist, this tract is lengthened to eighteen pages, for which one *shilling* is demanded; whence we learn the delicacy of this surgeon's conscience! His deliberate respect for truth is evinced by the following, among other assertions: "In respect to the state of the experiment in Scotland, it must not be forgotten, that, at a very early period, the University of Edinburgh was so fully assured of the utility and security of Vaccination, that the honorary degree of Doctor in Medicine was conferred on the *Discoverer* of this blessing." p. 5. The *College of Physicians* at Edinburgh, and to their honour it must be mentioned, elected Dr. Jenner a Fellow of their corporation; and our compiler of *reports*, having heard of this election, and not knowing, poor man, any difference between that College and the University, announced the foregoing *truth*. He has also affirmed, that "it has likewise been lately *discovered*, that, although DR. JENNER was so fully *convinced* of the *infallible security* Vaccination afforded *to others*, he was

not *quite* satisfied that it would prove equally efficacious in his own family. *He therefore, with true parental caution, inoculated his own child with Small-pox matter.*" p. 2. False and base insinuation! Dr. Jenner's conviction, we speak from personal knowledge of the fact, is unaltered; his family is grown up, far above the period for inoculation of one sort or the other; and he has lately had the misfortune to lose his son at the age of twenty-one years. What are we to think of the cause, or of its advocates, when such flagitious falsehoods are invented for its support?

The scandalous nature of the publication, just mentioned, has led us inadvertently into a digression, somewhat foreign to the purpose of this report.—It is difficult to acquire an accurate view of the extent to which vaccination has been practised in London, during the past year, in consequence of the variety of sources, and the want of regular reports. From the vague statements, which we have been able to collect, we apprehend that we under-rate the number, vaccinated at the public institutions, when we state it at three thousand. We have been informed, that half that number underwent vaccination at the Small-pox Hospital, and that several hundred have also been subjected to the practice, at the station belonging to the National Vaccine Establishment, under the superintendence of Mr. Gillham, at Mr. Hill's Chapel. The other stations, and especially the central one, have, we fear, executed but little. Of the extent of the practice in the London Vaccine Institution, under the management of Dr. Walker, we have no information; but, from the activity of its inoculator, we may presume, that it has not been unemployed.

Nothing but the lapse of time can dispel the erroneous impressions, which have been so industriously enforced on the minds of the uninformed, or correct the prejudices which have been thus excited and fostered, especially in the metropolis. But we are persuaded, that every succeeding year will invalidate the influence of anti-vaccine artifices. We already see that many thousands, who were vaccinated at a much greater distance of time, than has been affirmed to

wear out the "temporary" security of vaccination, continue to live in this metropolis, in which, on a moderate computation, ten thousand individuals have laboured under small-pox within the last year, and in which no person is at present secure from the contagion for a day, but all, who are susceptible of its operation, are constantly liable to the fate of Miss Joanna Cumberland, and the Russian Princess, as recorded by Dr. Adams.* We are happy to learn, however,

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* On the whole, we think the following document, to which we alluded in the conclusion of our review of the pamphlets on vaccination, (supra, p. 198,) too important to be omitted.

"As some persons have lately attempted to prejudice the minds of the public, by representing Vaccine Inoculation as a doubtful security against small-pox, limiting its influence to a certain period, and wishing us to believe, that its preventive powers diminish in proportion to the distance of time from inoculation;—I have, therefore, at the request of the Right Honourable and Honourable the Governors of the Foundling Hospital, instituted such experiments as enable me (a second time) to congratulate the public on their successful event.

"From my situation, as surgeon to the Foundling Hospital, I have had it fully in my power to select such cases as had been faithfully recorded by me to have undergone Vaccination at the earliest period of cow-pock inoculation in this city, and such have been approved of by those gentlemen who have honoured me with their presence, to witness and subscribe their names to the progress and event of the following experiment on nineteen children chosen for the purpose, who were divided into two classes. The first nine, comprehending those who, in a state of infancy, were vaccinated by me between the 30th December 1800, and 3d July 1801, now more than eight years. These were again inoculated with small-pox infection by George Stewart, Esq. Surgeon-General, on the 24th July, 1804, (and witnessed by several gentlemen of the first respectability in their profession,) in like manner to disprove the assertions of Mr. Goldson, as may be seen in the 12th volume of the Medical and Physical Journal, and with the most complete success—all having resisted the small-pox, although exposed to it in every way possible.—These nine children, with ten others, who were also vaccinated by me in a state of infancy, from 15th July, 1801, to 30th August, 1802, upwards of seven years, were again submitted to small-pox inoculation, on Friday, 22d December last. The infection taken from a child of Mr. Stafford's, No. 7, Hanbury Lane, in confluent small-pox, and and the matter inserted in two places in the arm of each child, in a fluid state, and in the greatest quantity.—In every instance, the punctures in the

that these prejudices against vaccination have not been universally disseminated, and that in some towns, in the north of England, no objection or doubt is expressed upon the subject; and small-pox has been, for a considerable time, unknown.

Although in the metropolis, as we have stated above, idiopathic fever, under any form, has been unusually rare, during the year 1809; we have to lament that, on two disastrous occasions, within that period, fever has been brought to our shores under its most destructive shapes, and has terminated the lives of multitudes of our countrymen. In January our naval and military hospitals were filled with the sick, who returned from Spain, at a tempestuous season, and some of whom remained in the hospitals so late as July.* On the arrival of the first ships, several patients died in the boats which brought them on shore, while the greater part were in the last stage of low fever, with the body covered with petechiæ and vibices. Afterwards, however, the fevers

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arm of each child, from the third day inflamed, and continued until the 7th, when the inflammation gradually subsided, as certified by Mr. Stewart, and marked in a table, which, in another publication, will be more fully expressed;—which circumstance has proved the activity of the small-pox matter inserted, and which must have affected the constitution, was it in the least susceptible of the disease.—Fourteen days have now elapsed, the inflammation of the punctures is entirely gone, and never was attended with the slightest *fever*, *sickness*, or *eruption*.

" In corroboration of the above facts, conducted with every degree of accuracy, and which cannot admit of the smallest doubt on the minds of those gentlemen who have witnessed them, and hereunto subscribed their names; I can safely assert, that I have submitted upwards of five hundred infants and children, vaccinated by me at this Institution, and at the Dispensary for Infant Poor and Cow-Pock Inoculation, as established in the year 1800, to a like experiment, and with the same result in every instance.

" J. CREIGHTON."

" Dublin, Merrion-Square, West,
January 4, 1810."

This paper is signed by seven Members of the Royal College of Surgeons in Ireland, and by four Apothecaries.

* See Dr. M'Grigor's account of the fever which appeared in the army, &c. Edin. Med. and Surg. Journal, for Jan. 1810.

appear to have assumed a different type, and to have been characterized by strong arterial action and great topical determination, frequently to the head, but more frequently to the lungs and pleura. Dr. M'Grigor remarks, that " a prominent feature of the first cases of this fever, which made their appearance on ship-board, immediately after landing, as well as in those who had been attacked in Spain, was the strong disposition to gangrene in the feet and legs. This was, most probably, induced by the previous circumstances of great fatigue and long marches, undertaken by the exhausted soldier, where, in many instances, he was badly provided with shoes. The tendency to mortification in the sacrum and back was likewise great, and phlegmonous abscesses frequently appeared on other parts of the body. In some cases erysipelas was seen; but the most constant symptom in this fever was the great determination to the head and chest, with, in many cases, a torpor of the abdominal viscera." The different accounts which Dr. M'Grigor, as Inspector of the Portsmouth, Severn, and South-west districts, received from the medical officers at different stations, accord in all the leading points. It appears to be established, too, by the reports of the most intelligent of these officers, that free purging was generally beneficial; that bark, and wine, and camphor, &c. in the early stages were prejudicial; and that the antiphlogistic system, and even general bloodletting, was the most successful mode of practice, wherever there were strong marks of topical determination. Dr. Clarke affirms, that the lancet was beneficial, whenever there was any symptom of local affection, such as pain in the head, thorax, or abdomen, and the arterial action considerable; and that, in those cases, the typhoid type seldom afterwards appeared. Mr. Burnett says, " I have had patients sent to me on the 8th or 10th day of the disease, that had been taking bark and camphor, under the idea that the disease was typhus, with high delirium, foul tongue, strong full pulse, and passing their stools and urine involuntarily. I have ordered them a bleeding of twenty ounces, blistered the head,

and given a cathartic; and on the following day have found my patient calm; in one case without pyrexia: and, by persevering in this plan, they ultimately recovered."

It is obvious, that practitioners are at length throwing off those hypothetical prejudices, by which the doctrines of debility had obscured their powers of observation; and we doubt not, that the mortality from fevers will be proportionately diminished.

But if the fatigues and privations of the Spanish campaign filled our hospitals in the south with sick, the marshes of Walcheren have sent crowds to every hospital within many miles from our shores; insomuch, that an appointment of many temporary and supernumerary staff physicians became necessary for their superintendence. Of the fever, thus imported, no accounts have yet been published by those who witnessed its progress upon the spot; and only one or two hasty and imperfect descriptions of it have been committed to the press, by individuals, who had occasion to treat the disease in those who returned sick to this country. This fever appears to have been a very aggravated form of the remittent of low countries, so well described by Sir John Pringle, as being the endemic of Zealand.* It is said to have assumed all types, intermittent, remittent, and continued, to have passed often from one of these to another, and to have been much connected with morbid conditions of the abdominal viscera, especially with enlargements of the liver and spleen. We have learned from several quarters, that purgatives, especially the mercurials, were of the most decided advantage in the treatment of this fever; and some have believed, that preparations of mercury, exhibited so as to produce the proper *mercurial* action, as has been recommended in the remittents of tropical climates, were exceedingly beneficial; while, as has been found in the same fevers, the early use of bark was generally prejudicial. Before the publication of our

* On Dis. of the Army, part i. chap. i.

next volume, probably much authentic information will be laid before the public, of which it will be our duty to present an abstract to our readers.

We have taken some pains to procure the French journals, since the permission of importing books, through Holland, has been granted: and have perused with care those which we have obtained, up to September last. With the exceptions of January, the spring and summer were cold, wet, and tempestuous, the weather undergoing perpetual vicissitudes, in France, and even in Italy, as in this country: and although, as we might expect under such circumstances, a similar succession of pulmonary and rheumatic complaints prevailed in Paris, together with croup and small-pox in March and April; yet, on the whole, the inhabitants of that city appear to have been afflicted with disease to an extent considerably greater than those of London. In the winter, the occurrence of apoplexy, in a proportion much greater than we are accustomed to see in this porter-drinking city, is frequently mentioned; and in July and August, bowel-complaints, especially diarrhœa and colic, were extremely prevalent, at the same time that rheumatisms, catarrhs, and sore-throats, were occasioned by the frequent chills and rains of that period.* But, above all, the prevalence of contagious fever, in some of its malignant forms, in Paris, implies that their so much vaunted police, however it may conduce to the security of the government, has not extended to those improvements on which the health of the citizens depends. We shall extract an important document, relative to this subject, from a report of the state of the hospital "de la Charité," during the first three months of the year, given by M. Fouquier, one of the physicians;† from which both the greater prevalence of typhus, and the much greater mortality in the hospitals of Paris, than in those of London and Edinburgh, will be manifest.

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* Gazette de Santé, No. XXIII.

† Journal de Médecine Pratique et de Bibliographie Medicale, Mai, 1809.

		Discharged.	Dead.	Remaining, April 1st.
Patients in the Hospital of La Charité on Jan. 1st, 1809.	104			
Admitted in January	146	108	28	
——— February	77	88	19	
——— March	115	95	18	86
Total	442	291	65	86

The mortality in this hospital is, therefore, on an average, upwards of one fifth of the whole number admitted; or, as M. Fouquier observes, it was one fifth in January, one fourth in February, and one sixth in March. We understand that the average mortality in the London hospitals, is about one in ten of those admitted; a fact, which demonstrates the superior degree of cleanliness and ventilation adopted in them, if not the superiority of medical management. In the Royal Infirmary, at Edinburgh, we believe, the mortality is about one in fourteen of the whole; being one in eight or nine in the clinical wards, in which the most severe cases are selected, and one in twenty in the other wards.

The following is the catalogue of the diseases and their terminations in the Hospital de la Charité, during the three months alluded to.

Diseases.	Admitted.	Cured.	Relieved.	Dead.	Remain.
Intermittent Fevers	81	52	7	—	22
Pulmonary Consumption	27	—	5	12	10
Chronic Catarrh	28	—	16	—	12
Aneurism of the Heart	24	—	10	9	5
Catarrh (acute)	22	17	1	—	3
Rheumatism (musculaire)	17	13	1	—	3
——— (articulaire)	9	5	4	—	—
——— chronic (vague)	3	—	1	—	—
Continued gastric Fevers (gastriques)	30	28	—	—	2
Fever, putrid, (ou adynamique)	16	—	—	9	—
———, malignant	7	—	—	7	—
———, inflammatory, (ou angioténique)	4	4	—	—	—
———, bilious	2	2	—	—	—
———, slow nervous	1	—	—	1	—

Diseases.	Admitted.	Cured.	Relieved.	Dead.	Remain.
Peripneumony	12	7	—	4	1
Pleurisy (acute)	8	4	—	1	3
——— (chronic)	2	—	—	2	—
Pleurodyne	2	1	—	—	1
Hæmoptysis	4	1	—	2	1
Inflammation of the tonsils	7	3	—	—	4
Scirrhus of the stomach	6	—	3	2	1
Pyrosis	1	1	—	—	—
Spasmodic vomiting	1	1	—	—	—
Periodic pain of the stomach	1	1	—	—	—
Jaundice	6	5	1	—	—
Abdominal obstructions (embarras gastriques apyrétiques)	10	6	—	—	4
Colic (from metallic poison)	16	13	—	—	3
Diarrhœa	7	5	1	—	1
Dysentery	3	1	—	1	1
Peritonitis (chronic)	2	2	—	—	—
——— (acute)	1	1	—	—	—
Erysipelas of the face	1	1	—	—	—
Measles	1	1	—	—	—
Paralysis	9	6	2	1	—
Palsy of the tongue	6	2	2	1	1
Apoplexy	2	—	—	2	—
General Dropsy	2	1	—	—	1
Ascites	6	1	—	—	—
Hydrothorax	1	—	—	1	—
Anasarca	3	1	1	—	1
Indeterminate or feigned diseases	7	2	—	—	5
Sciatica	3	—	1	—	2

The few remaining diseases are trifling, and need not be particularized. The number of intermittents is remarkable, and that of organic diseases of the heart still more so: and the fatality of the putrid and malignant fevers, which are here distinguished from each other, (the former are also called fièvres adynamiques, the latter ataxiques,) is also unusually great. In some of the items of the list there is a defect: of the 16 cases of putrid fever, for instance, only 9 are accounted for; and of the 6 cases of ascites, only one.

The French journalists continue to speak, with great praise, of the benefits of vaccination: several publications have appeared, within the last year, describing the

appearances of the cow-pock, and detailing instructions for conducting the practice; and several intelligent correspondents, in those journals, treat of it in terms of high approbation. Nevertheless, we learn from a communication of Dr. Dufour, of one of the Parisian hospitals, that the opposition of our Moseleys, &c. has not been limited in its influence to the native country of the cow-pox; since their writings have been maliciously circulated on the continent, either by their agents, or by men of similar disposition. Dr. Dufour speaks indignantly of a "brochure, que la malveillance introduisit et colporte encore en France, signée des docteurs *Moseley, Squirrel,* et *Rowley.*" We doubt not, however, that the prediction of the editor of the Gazette de Santé will be verified. "La vaccine, cette découverte si précieuse à l'humanité, suffirait seule pour immortaliser le siècle présent. La postérité élèvera un jour des statues à celui qui l'inventa, comme à l'un des premiers bienfaiteurs de l'humanité."

Great exertions are made by the chemists and pharmaceutical operators, to prepare substitutes for those articles of diet, which are the produce of the colonies; and it is truly amusing to observe the commendations of their newly invented tea and coffee, which, both in flavour and wholesomeness, far excel the productions of China and the Indies. One person boasts of his *Thé orangé,* (the dried petals of the orange-tree flowers,) as "bien plus aromatique et plus sain que le thé de la Chine:" another recommends the young shoots of the *juniper;* "ce thé," he says, "flatte plus le gout que le thé Indien," &c. This writer likewise informs the poorer classes of the people, that they may find a substitute for coffee, (which a fatal habit has rendered one of the necessaries of life,) in *acorns,* properly dried and roasted. Still greater exertions are making to obtain substitutes for sugar, and various syrups from grapes and raisins, and even from the juice of Turkish wheat or maize, have been manufactured for that purpose.

A specific remedy for the gout, the discovery of a M. Pradier of Paris, is several times mentioned in the Gazette de Santé; it is said to consist of a dark-yellow (jaunâtre) liquid,

of an aromatic smell, applied, in a large linseed poultice, over the feet and legs; and, in the case of a M. de St. Mery, Counsellor of state, related by himself, it completely removed the disease in the course of one night. M. Pradier drank some of this liquid, in order to shew M. de St. Mery, that it contained nothing deleterious. Whether this be the same remedy, which has lately been introduced in London, from France, under the title of *Eau Medicinale*, we know not. This last mentioned "specific," after having been used with success by several persons, has been taken by Sir Joseph Banks; and it completely removed his commencing gout, in the course of twenty-four hours, although he anticipated a confinement of six or seven weeks, as was usual from such an attack. This effect Sir Joseph has publicly talked of. How far experience may corroborate the virtues of this new remedy, or establish the safety of the practice, time alone can inform us. The only specific against the gout, in which we have at present any faith, is the combination of rigid temperance, with active exercise, begun from the first appearance of the disease, and persevered in with unremitting attention, especially in constitutions hereditarily predisposed to its attacks.

An agent, approaching to a specific poison for the tape-worm, appears to have been discovered in the oil of turpentine, taken internally in much larger doses than have hitherto been deemed safe; viz. from half an ounce to two ounces. Several cases have been mentioned, in the medical societies of London, in which it had operated as a speedy means of expulsion of this troublesome animal.

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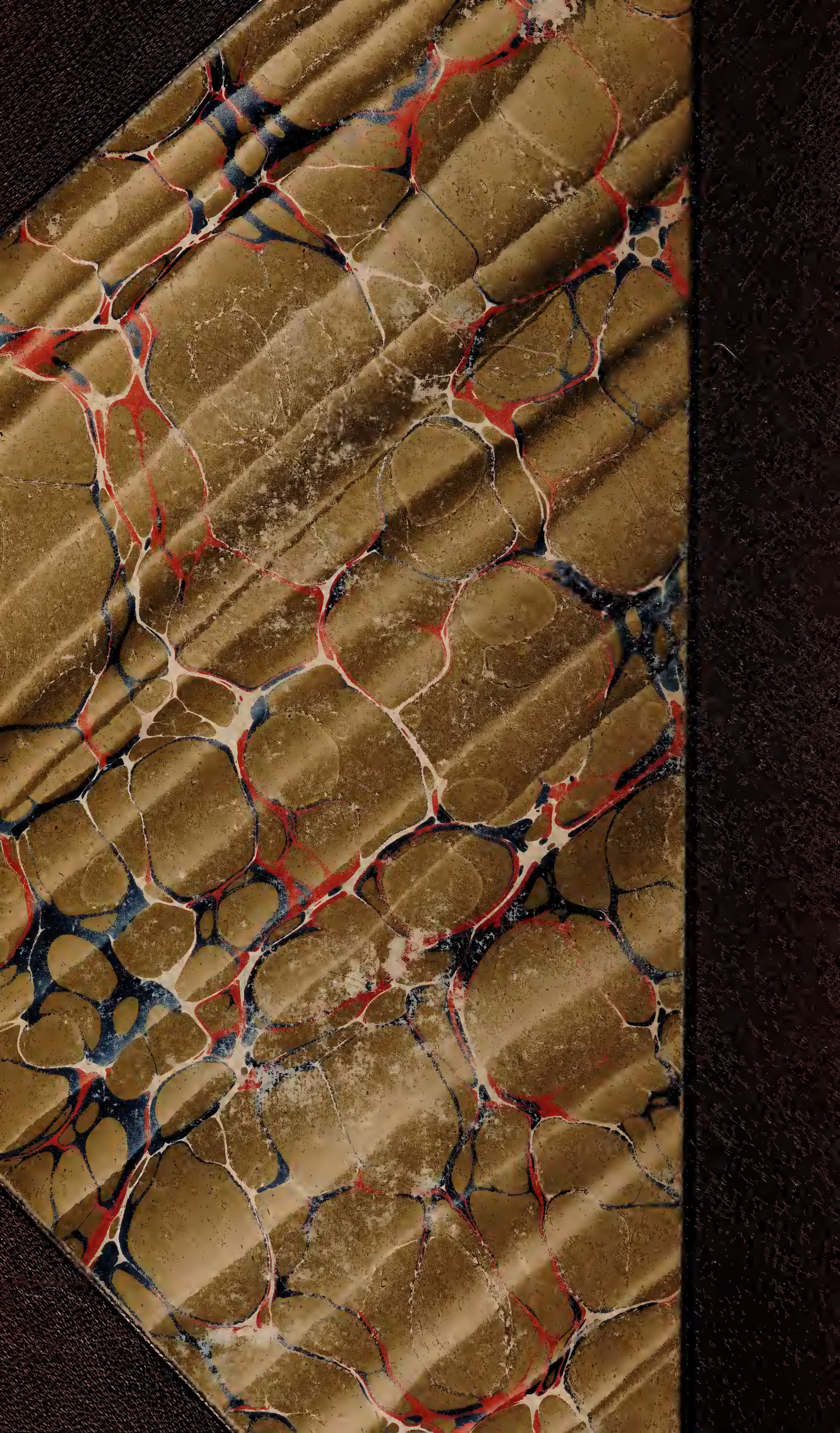
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